ATV ridercourse handbook

A PUBLICATION PROVIDED BY THE ATV Safety Institute®

This Handbook was designed to accompany the ATV Safety Institute (ASI) ATV *RiderCourse*SM. To enroll in the ATV *RiderCourse* nearest you, visit www.atvsaftey.org and click on "Online Enrollment," or call 800.887.2887.

The information contained in this publication is offered for the benefit of those who have an interest in riding all-terrain vehicles. The information has been compiled from publications, interviews and observations of individuals, and organizations familiar with the use of all-terrain vehicles and education.

Consult your state or local regulatory agencies for information concerning the use of ATVs in your area. Although the ATV Safety Institute will continue to evaluate and publish responsible viewpoints on the subject, it disclaims any liability for the views expressed herein.

The ATV Safety Institute is a division of the Speciality Vehicle Institute of America, a national not-for-profit association founded by the major U.S. distributors of all-terrain vehicles. Supporting members are AlphaSports, Arctic Cat, Bombardier, Bush Hog, Honda, John Deere, Kawasaki, Patriot, Polaris, Suzuki and Yamaha.

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FOREWORD

This Handbook was developed by the ATV Safety Institute for use in the ATV *RiderCourse*. The ATV *RiderCourse* is a hands-on learning experience, with particular emphasis on the safety implications relating to each lesson. The course also covers protective gear, environmental concerns, local laws and safety techniques. The training includes pre-ride inspections, starting and stopping, turning (gradual and quick), hills (stopping, u-turns, traversing), emergency stopping and swerving and riding over obstacles.

ATVs are fun as well as functional. They are used in all types of off-highway applications such as farming, military activities, police patrolling, racing and recreational riding.

Being responsible, using common sense and practicing important skills are all important ingredients in making ATV riding more rewarding.

Your ATV Owner's Manual

Take time to carefully read and understand your owner's manual. Paying close attention to the manual could save you from severe or even fatal injury.

Read and comply with all the labels on your ATV. These labels address warnings about potential hazards. If you are unsure about something, check your owner's manual or see your ATV dealer.

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INTRODUCTION TO SAFETY AWARENESS CHAPTER 1

So, you are anxious to ride. Before you do, though, be sure you and your ATV are ready. If you are not, or if your ATV isn't checked out, the results can range from embarrassment to severe or even fatal injury.

For your safety, understand and follow all the warnings contained in the owner's manual and the labels on your vehicle.

This chapter will introduce you to ideas about safety while operating an ATV. In turn, this introduction will help prepare you to apply the suggestions contained in the remaining chapters.

Activities involving movement and wheels can result in accidents and injuries. However, an ATV handles differently from other vehicles including motorcycles and cars. In addition, ATV riding is physically active, another source of risk. You should be aware of these risks in order to manage them and reduce the possibility of injury.

ATV Safety Alert

An ATV Safety Alert has been published. The most current Alert has been printed in this Handbook. Please read the accompanying ATV Safety Alert on page 39. It contains important safety information.

Risk Awareness

Knowing the risks and hazards of all-terrain vehicle operation is the first step in developing safe riding behavior. When you know and understand the hazards of ATV operation you can take steps to avoid them. Some of these hazards can be avoided by using common sense. Riding without a passenger, and not attempting to do stunts, wheelies, or jumps are obvious examples of risk reduction. Also, be sure to follow the age and ATV size recommendations for younger riders.

ATV Size	Recommended Minimum Age
Under 70cc	*6 years old*
70 - 90cc	*12 years old*
Over 90cc	*16 years old*

Some people fail to identify hazardous situations which should be obvious. Swimmers who dive into a shallow pond, the driver who does not slow down in foggy conditions, or the bicyclist who rides against traffic are examples. There are some who think accidents only happen to other people. They behave as if they will never experience the pain and inconvenience of an accident. The ATV rider who knows how to manage risk effectively is putting him or herself at an advantage in ATV riding situations.

The wise ATV rider knows that accidents are not just chance happenings. Most accidents can be prevented with proper planning and responsible behavior. Some people see accidents as bad luck or focus on a single cause. Safety experts recognize that there is rarely only one cause for an accident or mishap. Usually, a combination of circumstances or events lead up to an accident-producing situation.

Safe ATV riding can depend on your ability to recognize hazardous riding conditions. How well you are able to read the terrain and environment will play a large part in how safe your ride will be.

Riding safely requires the rider to take responsibility for his or her own riding abilities, the riding environment and the capabilities of the ATV. Riding within personal limits may seem simple to do, but many injuries are caused by riders going beyond their abilities. You should look at riding as an activity requiring the interaction of three things: personal ability, ATV capabilities and environmental or terrain conditions.

Full enjoyment of your ATV requires some of the same kind of precautions associated with other sport and recreational activities. For example, it is important to always wear proper protective gear when operating an ATV, just as you would if you were playing football.

For ATV riding, this includes an approved helmet with adequate eye protection, sturdy over-the-ankle-boots, gloves, long-sleeved shirt or jacket and long pants. Depending on the environment in which you ride and your personal skill level, extra body protection may be a wise choice.

Managing Risk

Managing risks means being a good decision maker. A large number of accidents are caused by poor riding decisions. You can learn to organize your thought processes and manage risk by using a thinking strategy to help you. This thinking strategy forms the acronym SIPDE: Scan, Identify, Predict, Decide, Execute.

SIPDE is a decision making process that helps you manage risks and enjoy a safe, comfortable ride. Each letter of SIPDE represents an action for the rider:

S	= Scan/Search terrain and environment
I	= Identify hazards or specific problems in your path
P	= Predict what may happen and think of the consequences
D	= Decide what to do based on riding abilities and capabilities of your ATV
E	= Execute your decision

Part of the risk associated with ATV riding may be effectively managed by wearing protective gear, thinking of the consequences of decisions, and applying the SIPDE strategy. It is up to you to make the choice to ride within personal limits, within the capabilities of the ATV, and within the limits of the terrain and environment.

This information provides insight into some of the risks associated with ATV operation and ways to manage these risks. These topics will be covered in greater detail in later chapters.

CHAPTER 1 QUIZ

1. Most physically demanding activities require special skills and present certain risks.

   ☐ True ☐ False

2. Learning information in the owner's manual will help a rider become a more safe and responsible ATV rider.

   ☐ True ☐ False

3. An ATV is not a toy and can be hazardous to operate.

   ☐ True ☐ False

4. A child under 12 years old should never operate an ATV with an engine size 70cc or greater.

   ☐ True ☐ False

5. An ATV is designed to carry an operator and a passenger.

   ☐ True ☐ False

6. Most accidents are preventable.

   ☐ True ☐ False

7. Riding beyond your limits will not cause accidents if you are a good rider.

   ☐ True ☐ False

8. Apparel you should wear while riding includes head and eye protection as well as body protection.

   ☐ True ☐ False

9. Managing risks means being a good decision maker.

   ☐ True ☐ False

10. SIPDE is a method to help organize your thought processes.

    ☐ True ☐ False

Personal safety and comfort are enhanced when you wear protective clothing. Operating without protective clothing increases your chances of severe injury in the event of an accident. Always wear an approved motorcycle helmet that fits properly.

Although complete protection is not possible, knowing what to wear and how to wear it can make you more comfortable when you ride and reduce the chance of injury in case of a spill.

Dressing Like the Pros

Helmets

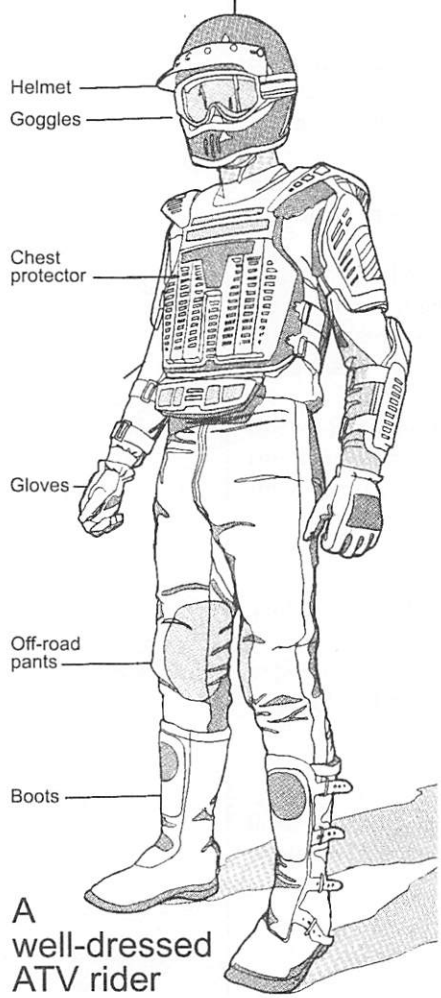
The single most important piece of protective gear you can wear is a helmet. A good helmet can help prevent serious head injuries. Studies have shown that wearing a helmet does not reduce essential vision or hearing. Operating without an approved motorcycle helmet increases your chances of severe head injury in the event of an accident.

What to Look for in a Helmet

Standards and Testing

Helmets protect your head in two ways: the outer shell resists penetration and abrasion, and the inner liner absorbs shock by slowly collapsing under impact. Both the shell and the liner essentially self-destruct by spreading the forces of an impact throughout the helmet material. That is why, in most cases, if a helmet has been damaged in an accident, it may be of little protective value in another mishap.

When you purchase a helmet, look for stickers inside or on the outside of the helmet, confirming compliance with the standards from one or both of these agencies: U.S. Department of Transportation (DOT), or the Snell Memorial Foundation.



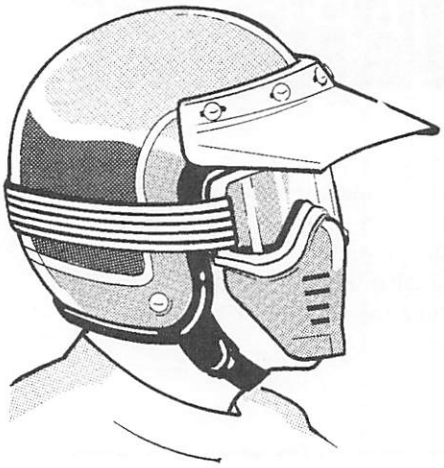
A well-dressed ATV rider

• **Department of Transportation (DOT) -** The DOT sticker appears on the outside, back, bottom edge of the helmet. Since 1980, all adult-sized helmets have been required to meet the DOT standard. Helmet dealers and distributors must ensure that all helmets they sell bear the DOT sticker.

• **Snell Memorial Foundation -** The Snell sticker is usually found on the inside of the helmet. Compliance with the Snell standard is voluntary. Snell has been testing helmets since 1969. Their standard has been revised as helmet design and manufacturing techniques have improved. They attempt to reproduce, under test conditions, the circumstances that represent potential hazards to riders.

Each organization has established procedures to evaluate helmets for:

- *Impact* - The shock absorbing capacity of the helmet.
- *Penetration* - The ability of the helmet to withstand a blow from a sharp object.
- *Retention* - The ability of the chin strap to stay fastened without breaking or stretching.
- *Peripheral Vision* - The helmet must provide a minimum side vision of 120 degrees to each side. (Most people's peripheral vision is between 110 and 115 degrees.)

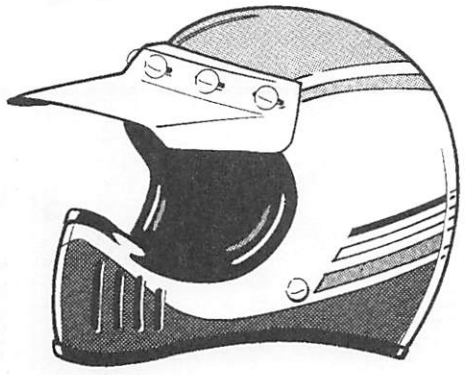


The Right Helmet for You

While color, design and price may influence your decision about which helmet to buy, protection should be your first consideration.

The full-faced helmet provides the most protection since it covers more of your face. Recent design improvements in shell material and interior ventilation have improved comfort. The next choice in protection is the three-quarter (open-face) helmet. It does not offer the face and chin protection that full-faced helmets do, so if you choose this style, it should be used with mouth/chin protection.

For a helmet to offer the most protection possible it must fit properly. Your helmet should fit snugly but comfortably and be securely fastened.



Always fasten your helmet's chin strap snugly. A helmet will do you no good if it comes off during a mishap.

The Right Helmet for Youngsters

A helmet is also the most important piece of protective gear for children. Athletic headgear such as hockey, football or skateboard helmets ARE NOT ACCEPTABLE for ATV riding. They do not have adequate energy absorption qualities for use while operating a motorized vehicle.

As with any helmet, a child's helmet must fit properly to be effective. Do not use an adult-sized helmet that is too large for a youngster. Helmets are available in children's sizes. Check with your ATV dealer.

Replacing Your Helmet

Plan to replace your helmet if it has been involved in an accident. Some helmet manufacturers will inspect and, when possible, repair a damaged helmet. If your helmet has been dropped, there may be damage that you don't see; you may want to take advantage of this service.

Most helmet manufacturers recommend that, under normal use, you should replace your helmet every two to four years. If you notice any signs of damage before then, replace it immediately. As mentioned above, helmets may crack or break if dropped.

Why replace a helmet every few years if it does not appear damaged? Its protective qualities may deteriorate over time. The interior padding compresses, offering less protection. The chin strap may fray or loosen at its attaching points and the shell may be chipped or banged. Probably the best reason, however, is the consistent improvement of design and protective qualities of helmets.

Since 1980, all helmet manufacturers have been required to stamp the month and date of production on the helmet. If you cannot remember when you bought your present helmet, just check the production date. If there is no date at all, you should definitely replace your helmet now.

Helmet Care

Follow the manufacturer's directions on caring for your helmet. Use only the mildest soap recommended.

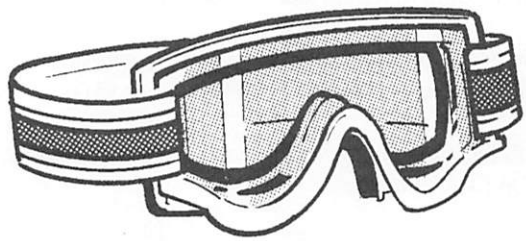
Avoid any petroleum-based cleaning fluids, especially if you own an injection-molded plastic helmet. Exposure to strong cleaning agents can cause the plastic helmet and its liners to decompose and lose protective value.

In Short

There are many considerations when deciding which helmet to buy. Talk with your local motorcycle and ATV dealer, and consult ATV enthusiast magazines for information to help in your decision.

Eye Protection

Being able to see clearly will help you ride more safely. Operating without eye protection can result in an accident and increases your chances of a severe eye injury in the event of an accident. An object such as a rock, branch or even a bug that hits you in the face can distract you; but if you are hit in the eyes, you could be blinded. Regular sunglasses do not provide enough protection when riding an ATV. A face shield or goggles will help protect you.

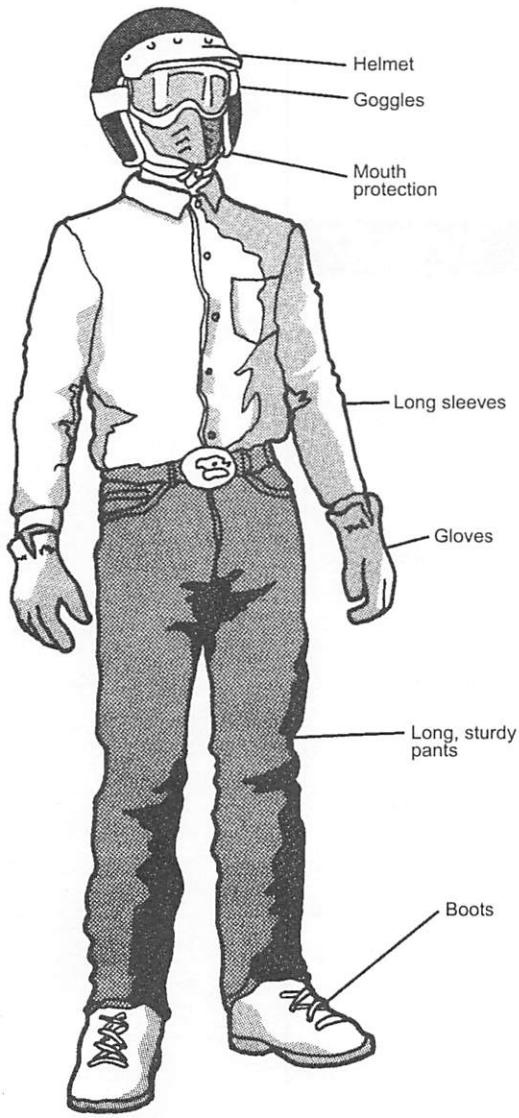


They should be:

- Free from scratches, bearing the standard marking VESC 8 (or V-8) or z87.1 in one corner, *or* constructed of a hard-coated polycarbonate.
- Securely fastened.
- Tinted for riding on bright days, clear for night riding or yellow for overcast days.

Gloves

Gloves should be of a quality that will help prevent your hands from getting sore, tired or cold, as well as offer protection in the event of a spill. Off-road style gloves, available at motorcycle and ATV dealerships, provide the best combination of protection and comfort. They are padded over the knuckles for added protection.



Boots

The minimum protective footwear is a pair of strong, over-the-ankle boots with low heels to help prevent your feet from slipping off the footrests. Off-road style over-the-calf ATV or motorcycle boots offer the best protection for feet, ankles and legs.

Clothing

It is important to protect your skin from scratches. A long-sleeved shirt or jersey and long pants are minimum requirements for rider protection. Off-road riding gear (such as jersey; shoulder pads/chest protector; and off-road pants with knee and shin pads) provide better protection.

Warming Up

Riding an ATV requires a lot of body movement. Doing warm-up stretches and exercises will help prevent muscle strain and injury.

Stretching

Remove large and sharp objects from pockets. Do not overexert yourself on warm-up exercises.

- *Neck stretch:* Tilt head forward and side to side - not back. Do not strain.
- *Arm circles:* Hold arms straight out to the side and rotate arms counterclockwise in 12-inch circles five (5) times. Do the same clockwise five (5) times each way.
- *Waist bends:* With feet at shoulder width, bend forward slowly at waist, repeat to the back and sides. Do five (5) bends.
- *Leg stretches:* Put one leg at a time on footrest or tire of your ATV and bend forward. Do each leg five (5) times.
- *Slight knee bends:* With hands on your waist, feet shoulder width apart, bend slightly at knee and stand back up. Do at least five (5) times.
- *Thigh stretches:* With legs wider than shoulder width, lean whole body to the left, then to the right. Do each direction five (5) times.

These are minimal exercises and repetitions suggested for warming up. As with any strenuous physical activity, you should consult your physician if there is any doubt about your being in shape to ride. Sore muscles or joints could limit your movement and require you to take extra precautions when riding.

CHAPTER 2 QUIZ

1. Your first consideration when purchasing a helmet should be price.

   ☐ True ☐ False

2. A helmet may not protect the head in a spill if the chin strap is not fastened.

   ☐ True ☐ False

3. Operating without eye protection can lead to an accident.

   ☐ True ☐ False

4. A helmet slightly damaged in a minor impact will still offer adequate protection.

   ☐ True ☐ False

5. Wearing a helmet will reduce normal peripheral (side) vision.

   ☐ True ☐ False

6. Open-faced helmets provide more protection than full-faced helmets.

   ☐ True ☐ False

7. Athletic headgear is suitable for ATV riding.

   ☐ True ☐ False

8. There are gloves available specially made for off-road riding.

   ☐ True ☐ False

9. Tennis shoes provide adequate protection in off-road riding situations.

   ☐ True ☐ False

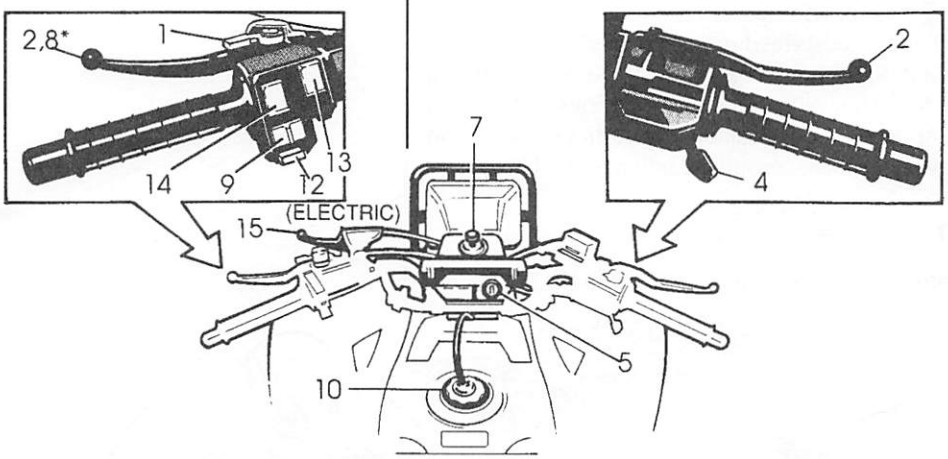
10. Warming up by stretching the muscles will help prevent strains while riding.

    ☐ True ☐ False

Read and study the owner's manual carefully, and look at your ATV to memorize the location of the controls.

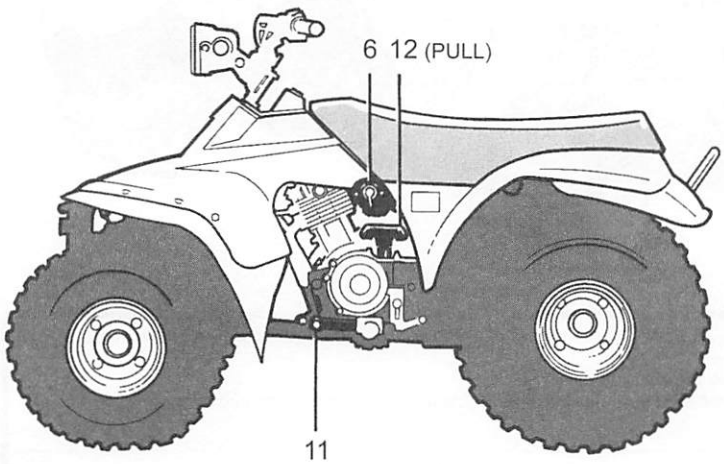
Know Your Controls

(controls shown are typical—your model may vary)



Identify these controls (if equipped):

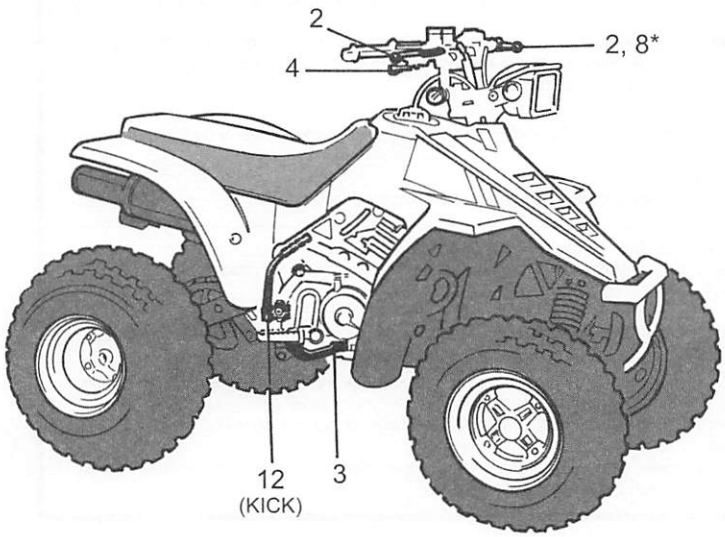
1. Parking brake
2. Hand brake lever(s)
3. Foot brake pedal
4. Throttle
5. Ignition switch
6. Fuel supply valve
7. Choke (primer)
8. Clutch*
9. Engine stop switch
10. Gas cap/tank vent
11. Shift lever
12. Starter (pull, kick, electric)
13. Light on/off switch
14. Light hi/lo switch
15. Compression release lever



(not shown)

Throttle limiter screw
Reverse gear lever
Transmission hi/lo lever
Differential lever
Steering lock
Seat release lever
Suspension adjustments

On manual clutch models



Mounting Your ATV

To mount your ATV correctly:

- Set the parking brake.
- Grasp the handlebar with your hand.
- Place your foot on the footrest—when mounting from the left, do not step on the shift lever.
- Lean over, grasp the handlebar with your other hand.
- Swing your leg over the seat and place your foot on the other footrest.
- Seat yourself in a comfortable position.
- Keep your feet on the footrests at all times, even when the engine is not running.
- Practice mounting and using the controls until you can operate the controls without looking at them.

Dismounting Your ATV

To dismount your ATV correctly:

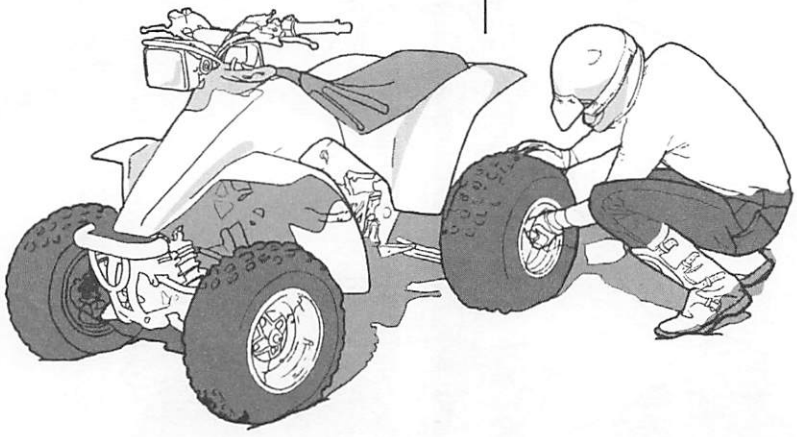
- Set the parking brake.
- Stop the engine using the engine stop switch.
- Turn off the ignition, fuel valve and vent cap (if present).
- Follow the steps for mounting in reverse order.

Checking Your ATV

A pre-ride inspection of your ATV's mechanical condition is important to minimize the chance of injury or being stranded, as well as to ensure the long-term enjoyment of your ATV. Remember, you can ride farther in an hour than you can walk in a day. Always inspect your ATV each time you use it to make sure the ATV is in safe operating condition. Follow the inspection and maintenance procedures and schedules described in your owner's manual. Pay special attention to warnings in your manual and on all labels on the ATV. Never modify an ATV through improper installation or use of accessories. All parts and accessories added to an ATV should be genuine or equivalent components designed for use on that particular ATV, and should be installed and used properly. If you have questions, consult an authorized ATV dealer.

Performing a Pre-Ride Inspection

An easy way to remember what to check before riding is the acronym T-CLOC.

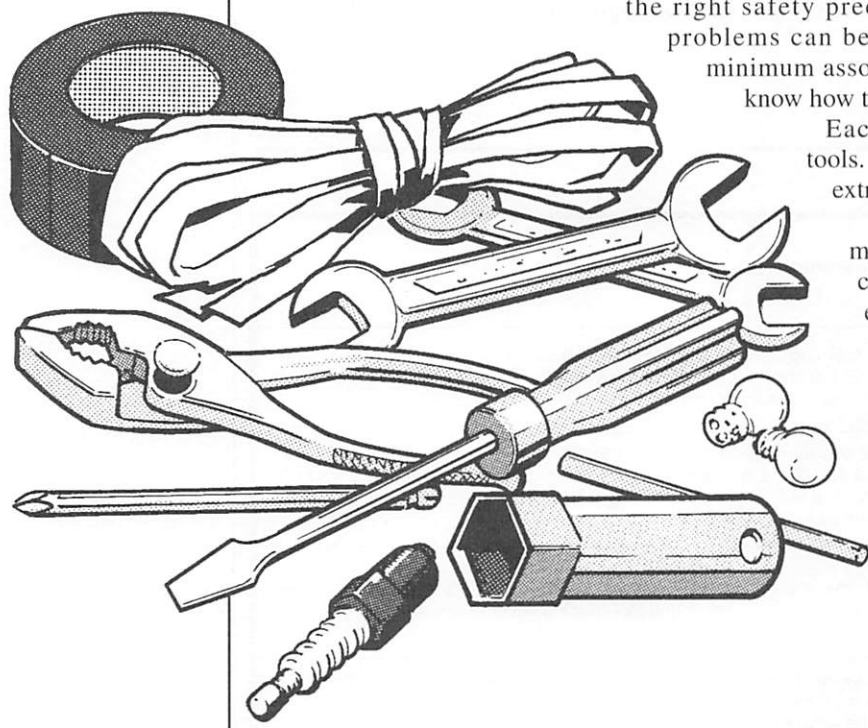


T	**TIRES AND WHEELS**	**1. Air pressure -** Always maintain the recommended tire pressure. If the tire pressure on one side is higher than the other side, the vehicle may pull to one side. **2. Condition -** Check for cuts or gouges that could cause air leakage. **3.** To avoid loss of control or injury, make sure axle nuts and wheel nuts are tightened and secured by cotter pins. Check these before every ride.
C	**CONTROLS AND CABLES**	**1. Controls -** Check the location of all the controls by sitting on the ATV. Make sure they work properly. **2. Throttle and other cables -** Make sure the throttle moves smoothly and snaps closed with the handlebars in any position. An off-road environment is hard on cables. **3. Brakes -** Do the controls operate smoothly and are the controls adjusted according to the owner's manual? Are they positioned for easy reach? Your brakes are a crucial part of riding and must always be in tip-top condition. **4. Foot shifter -** Is it firmly attached and positioned for safe operation?
L	**LIGHTS AND ELECTRICS**	**1. Ignition switch (if so equipped) -** Check the condition of the switch and make sure it works properly by switching it off and on during your warm-up period. **2. Engine stop switch -** Does it turn off the engine? **3. Headlight and taillight (if so equipped) -** Are they working? You could be caught out after dark.
O	**OIL AND FUEL**	**1.** Do not get stranded because you are out of oil or fuel. Know your ATV's cruising range. **2.** Check oil level with dipstick or sight glass while the engine is off. Check your owner's manual for procedure. **3.** Always start your ride with a full fuel tank. **4.** Check for fuel or oil leaks. **5.** Take off the air filter cover and check the condition of the filter element. Be sure it is clean and not torn or blocked.
C	**CHAIN AND DRIVE SHAFT CHASIS**	**1. Chain -** Inspect, adjust and lubricate the chain regularly. Your chain is the vital link from the engine to the wheels. Check for chain slack or free play so that it is within specifications as described in your owner's manual. **2. Drive shaft -** If your ATV is equipped with a drive shaft rather than a drive chain, check for oil leaks. Maintain its oil supply as outlined in your owner's manual. **3. Nuts n' bolts -** Riding in rough terrain will loosen parts. Look and feel for loose parts while the engine is off. Shake handlebars, footrests, etc., before each ride and periodically check fasteners.

Tool Kit

Emergency situations can arise with any motor vehicle: running out of gasoline, a burned out headlight at night, or unknown hazards on the trail. These situations are not only inconvenient, but can result in unsafe conditions for ATV riders.

Riding off-road is not like being on the freeway with your car—the towing club is not just a phone call away. Since ATVs are for off-road use only, riders must be prepared by taking the right safety precautions. Fortunately, most ATV problems can be fixed on the trail if you carry a minimum assortment of tools and spare parts and know how to use them.



Each ATV comes with a basic set of tools. Along with tools you should carry an extra spark plug (or two).

On extended rides or long trips, more than the basic tools should be carried to help make repairs, such as: electrical tape, spare bulbs, mechanic wire, duct tape, knife, a flashlight if you ride after dark, and a tow strap or length of rope that can be used if repairs are not possible. These items should be carried in addition to a well-stocked survival kit (page 32).

Following your owner's manual maintenance schedule will help prevent most breakdowns, but once in a while your ATV may fail. If you are riding miles from help, carrying the above items could save you a long walk. Remember you will not have your tennis shoes on!

CHAPTER 3 QUIZ

1. To learn the location of the ATV's controls, read the owner's manual.

   ☐ True ☐ False

2. A rider should know the location and function of all controls on an ATV before riding.

   ☐ True ☐ False

3. Looking at the controls while riding is a safe action.

   ☐ True ☐ False

4. You should keep your feet on the footrests at all times.

   ☐ True ☐ False

5. You should set your parking brake after safely dismounting your ATV.

   ☐ True ☐ False

6. If you do not inspect your ATV before riding, you decrease your chances of an accident.

   ☐ True ☐ False

7. Improper tire pressures may affect the operation of an ATV.

   ☐ True ☐ False

8. To remember the pre-ride inspection procedure, use the acronym T-CLOC.

   ☐ True ☐ False

9. The basic ATV tool kit is enough to carry when going on extended rides.

   ☐ True ☐ False

10. It is best to use genuine replacement parts for your ATV.

    ☐ True ☐ False

CHAPTER 4 STARTING YOUR ATV

When you start your ATV you are responsible for controlling it. Read the owner's manual section on starting your ATV and use the starting procedure represented in the letters BONE-C. Practicing this procedure will help you start the engine quickly and efficiently.

Starting Procedures

B	BRAKES	1. Set the PARKING BRAKE.
O	ON	2. Turn fuel cap vent to ON position. Also turn the fuel valve to ON or RESERVE position, depending on how much fuel is in the machine. Turn ignition key on, if equipped.
N	NEUTRAL	3. Check that the transmission is in NEUTRAL. To make sure it is in neutral, check the NEUTRAL indicator, if equipped. If necessary, release the parking brake, rock the machine back and forth keeping your feet on the footrests, then reapply the parking brake.
E	ENGINE	4. Check that the engine stop switch is in the RUN or START position. The engine stop switch is usually found by either the left or right hand grip.
C	CHOKE	5. If the engine is cold, put the CHOKE in the ON position. Check your owner's manual for choke location. 6. Start the engine according to the directions in your owner's manual. 7. Once the machine is warmed up, return the choke to its normal position. This is very important because if you do not the machine will not run properly.

CHAPTER 4 QUIZ

1. The correct way to start a particular ATV is in the owner's manual.

   ☐ True ☐ False

2. A way to remember the engine starting routine is to use the acronym T-CLOC.

   ☐ True ☐ False

3. Part of the engine starting routine is being sure the parking brake is set.

   ☐ True ☐ False

4. Some ATVs have an "on/off" vent on the gas cap.

   ☐ True ☐ False

5. The engine should be started with the transmission in first gear.

   ☐ True ☐ False

6. The parking brake should be set when rocking the ATV to check for neutral.

   ☐ True ☐ False

7. Keep your feet on the footrests when rocking the ATV to check for neutral.

   ☐ True ☐ False

8. The engine stop switch is located on the fuel tank.

   ☐ True ☐ False

9. Put the choke in the "on" position when starting a warm engine.

   ☐ True ☐ False

10. The fuel valve should be turned to the "on" or "reserve" position before starting the engine.

    ☐ True ☐ False

Before starting out, be sure to review your owner's manual, paying special attention to the warnings and procedures. Remember to always wear the proper protective gear while operating an ATV. Be sure riders under the age of 16 are under adult supervision while riding. Bring an experienced rider along to help you if you have problems.

The first step is mastering the basic skills needed by an ATV rider. These include riding in a straight line, shifting, and braking. Learning these basics is essential in advancing your abilities as an ATV rider.

Posture

The correct riding posture will help you to easily operate the controls and help you react more quickly when shifting your body weight. Proper straight-line riding posture includes:

- Head and eyes up, looking well ahead.
- Shoulders relaxed, back straight.
- Elbows bent, slightly out away from your body.
- Hands on the handlebars.
- Knees in toward the tank.
- Feet on the footrests, toes pointing straight ahead.

Always keep both hands on the handlebars and both feet on the footrests of your ATV during operation. Removing even one hand or foot can reduce your ability to control the ATV or could cause you to lose your balance and fall off. If you remove a foot from a footrest, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.

ATVs are rider-active; to enhance the performance capabilities of the ATV you must shift your body weight. This is especially true in maneuvers such as turning, negotiating hills, and crossing obstacles. These operating techniques are covered in more detail in later chapters.

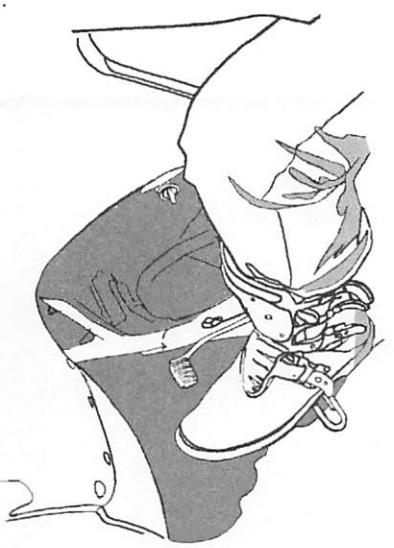
Starting Out

When starting out:

- Make sure the parking brake is set.
- Mount the ATV.
- Start the ATV using BONE-C.
- Hold the rear brake.
- Shift into first gear. (See your owner's manual for procedure for your model ATV.)
- Release the parking brake.
- Release the rear brake and *slowly* apply the throttle.
- If your machine has a manual clutch, release the clutch *slowly,* while gradually increasing the throttle. If the clutch is engaged suddenly the ATV might move abruptly, causing you to lose control.
- Remember to keep your feet on the footrests at all times!

When riding in a straight line, remember to look well ahead, where you want to go, not at the controls or immediately in front of the ATV. This will help you maintain a straight course.

Shifting Gears



Because there are several types of ATV transmissions, you must be certain you know how to shift the transmission of the ATV you are riding.

- Always release the throttle while shifting to prevent the front wheels from lifting.
- Learn the sounds of your engine so you know when to shift to keep the engine speed in the most efficient range.
- If your ATV has a manual clutch, learn where the friction zone is to prevent stalling and allow smooth shifting.

Some ATVs are equipped with reverse gear. Improperly operating in reverse could result in serious injury. Follow these recommendations when operating in reverse.

- Look behind you for obstacles or people.
- When it is safe to proceed, operate slowly.

Braking

Look ahead when braking, not at the ground immediately in front of you. Following these tips will help you make smooth, controlled stops.

- Release the throttle.
- Shift to a lower gear to use the engine to slow the vehicle.
- Apply both brakes equally (if equipped).
- Avoid excessive braking while cornering. Do most of your braking *before* the turn.
- Apply both brakes lightly on slippery surfaces.
- Keep head and eyes up.
- Keep your feet on the footrests at all times.

Parking

When parking your ATV always try to find flat ground, and:

- Shift into neutral.
- Stop the engine with the engine stop switch and, if equipped, turn off the ignition switch.
- Set the parking brake, or shift into a low gear if you do not have a parking brake, to keep the ATV from rolling.
- Turn the fuel off.

CHAPTER 5 QUIZ

1. When riding an ATV, it is best to wear proper protective gear.

   ☐ True ☐ False

2. Operating an ATV requires that both hands be firmly on the handlebars.

   ☐ True ☐ False

3. The brakes should be used when shifting into first gear from neutral.

   ☐ True ☐ False

4. When starting out in first gear, it is safest to look at the controls.

   ☐ True ☐ False

5. Always release the throttle while shifting.

   ☐ True ☐ False

6. A rider should learn the sound of the ATV engine for better operation.

   ☐ True ☐ False

7. To make slow speed stops, use only one brake.

   ☐ True ☐ False

8. It is best to do most of your braking before entering a turn.

   ☐ True ☐ False

9. It is best to look down at the stopping point when using the brakes.

   ☐ True ☐ False

10. It is proper to shift to a lower gear when coming to a stop.

    ☐ True ☐ False

Handling characteristics for ATVs vary depending upon basic design and how they are equipped. The turning information in this Handbook applies to most ATVs with one exception: ATVs with unlocked differentials. If your ATV has a differential, be sure to lock the rear axle before practicing the turning techniques in this Handbook.

Refer to your owner's manual for instructions.

ATVs with solid rear axles, and those with locked differentials, turn both rear wheels at the same speed. This means when turning the inside wheel must "slip" slightly on the surface (see Figure 1). ATVs with unlocked differentials allow the rear wheels to turn at different speeds. If a rear wheel on an ATV with an unlocked differential leaves the ground, it will spin freely. Then when it touches the ground again, it may grab and cause you to lose some control.

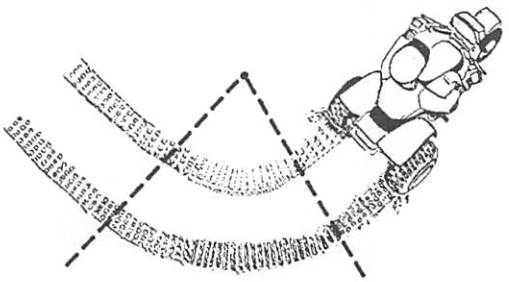


Figure 1.

Turning Basics

Always check your owner's manual for the recommended turning techniques for your ATV. The following basic turning technique applies to ATVs ridden at low to moderate speeds. Be sure to practice turning at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.

At Low Speeds:

- Move your body weight forward and to the inside of the turn.
- Turn the handlebars while looking in the direction of the turn.

As you increase speed or turn more sharply, move your body weight farther toward the inside of the turn to maintain your balance.

If your ATV starts to tip while turning, lean your body farther into the turn while gradually making the turn wider, if possible.

At Higher Speeds:

The method of turning at a higher speed is similar to turning at a low speed. The difference is that as speed increases, you must lean farther toward the inside of the turn. This is to counteract the higher centrifugal forces as cornering speed increases.

If your ATV starts to tip toward the outside of the turn while turning, lean your upper body farther into the turn while gradually reducing throttle and, if possible, make the turn wider by straightening the handlebars. Keep your feet on the footrests.

Sharp Turns

Learning to make sharper turns through practice will help you respond to crooked trails or obstacles within your path.

Be sure to slow down before the turn. Keep your eyes up, looking through the turn at your intended path of travel. Watch for terrain irregularities so that you can slow down as necessary. Sharper turns require more leaning in the direction of the turn. Keep the front wheels turned in the direction of the turn. If an error in judgment causes the ATV to start to tip toward the outside of the turn, straighten the handlebars or lean your upper body more into the turn.

Remember, it is important to first practice gradual turns and then progress toward sharper turns as your riding skills develop. Be patient and practice basic skills before moving on to more difficult maneuvers.

Quicker Turns

Quicker turns are sometimes required to avoid obstacles in your path. You should practice coordinating speed, body position and weight shift to help you make quick directional changes.

Keep your feet on the footrests to maintain maximum control for maneuvering the ATV. Quicker turns require quicker weight shifts. It helps to rise off the seat slightly (do not stand up). Quicker turns are sometimes easier to negotiate if you combine a short burst of throttle with the proper weight shift. Look well ahead and allow the ATV to move underneath you. As with any turn, if the ATV starts to tip toward the outside of the turn, slow down and straighten the handlebars and/or lean more to the inside of the turn. Adjust your speed to match conditions.

CHAPTER 6 QUIZ

1. Most ATVs are equipped with solid rear axles.

   ☐ True ☐ False

2. Improperly turning, particularly at higher speed, can cause an ATV to tip to the outside of a turn.

   ☐ True ☐ False

3. When turning you should lean away from the turn.

   ☐ True ☐ False

4. If an inside wheel starts to lift while you are turning, you should straighten the handlebars or lean farther into the turn.

   ☐ True ☐ False

5. To turn an ATV at low speeds it is helpful to shift your body weight to the rear.

   ☐ True ☐ False

6. When preparing to turn, you should slow down before the turn.

   ☐ True ☐ False

7. Gradual turns require more skill than do sharp turns.

   ☐ True ☐ False

8. Quick turns are easiest with your body weight on the back of the seat.

   ☐ True ☐ False

9. The best way to perform a quick turn is to sit centered on the seat.

   ☐ True ☐ False

10. You should look ahead in your intended path of travel during a turn.

    ☐ True ☐ False

CHAPTER 7 QUICK STOPS AND SWERVING

Applying a good riding strategy will decrease the likelihood of having to make a quick stop. Scan and identify potential hazards several seconds ahead in your intended path of travel. Practice quick stops in a flat open area so you can get used to how your ATV responds to your input. Be especially careful on excessively rough, slippery or loose terrain.

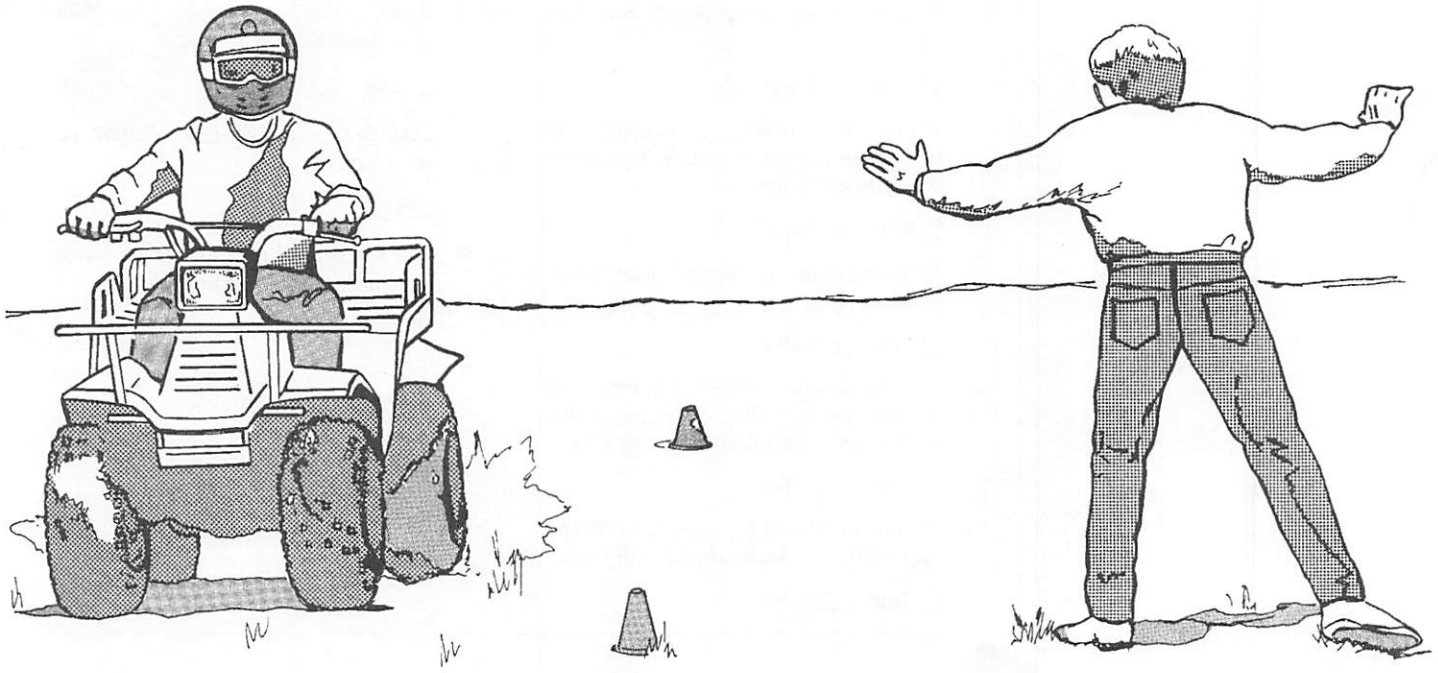
This is a more advanced riding skill. Remember, do not exceed your abilities.

Stopping Quickly

Because nature is constantly changing, you must be prepared to stop quickly, slow down or swerve to avoid obstacles, such as fallen trees or washouts across your trail. An animal may dart out in front of you, or you may meet another rider as you round a bend. Never ride faster than your visibility allows.

A quick stop could be necessary at any time, so remember:

- Ride within your ability.
- Use both brakes when stopping.
- Slow your ATV when cresting a hill or going through a turn.
- Never ride past your limit of visibility.
- Shift weight properly if stopping in a turn.
- If you accidently lock the wheels, release the brakes momentarily and reapply the brakes more gradually.
- Keep your feet on the footrests.



Swerving

You should be able to make emergency swerves to avoid unexpected hazards when riding Follow these guidelines to help prevent mishaps:

- Keep your feet on the footrests.
- Look in the direction of the swerve.
- Shift weight to the inside of the turn.
- **DO NOT** brake while swerving—brake AFTER swerving and only after the ATV is traveling in a straight line.

CHAPTER 7 QUIZ

1. Using a good riding strategy will decrease the chances of having to execute a quick stop.

   ☐ True ☐ False

2. Making a quick stop or performing a swerving maneuver is easier at faster speeds than at slow speeds.

   ☐ True ☐ False

3. You should never ride faster than visibility allows.

   ☐ True ☐ False

4. The sudden appearance of an animal during a trail ride may require a rider to perform an emergency maneuver.

   ☐ True ☐ False

5. A quick stop in a straight line requires more skill than making a quick stop in a turn.

   ☐ True ☐ False

6. You should not brake and swerve at the same time.

   ☐ True ☐ False

7. When swerving, you should look in the direction of the swerve.

   ☐ True ☐ False

8. Braking and swerving at the same time could result in a spill.

   ☐ True ☐ False

9. Stopping quickly or swerving are considered more advanced riding maneuvers.

   ☐ True ☐ False

10. Your feet should be kept on the footrests during an emergency maneuver.

    ☐ True ☐ False

CHAPTER 8 RIDING STRATEGIES

You need to know the area in which you are riding and what you and your ATV can do in order to have a safe, enjoyable ride. Your riding areas may not have the types of terrain discussed in this chapter, but it is still wise to know the strategies to ride in them.

Reading the Terrain

Choose places in which you can ride safely. Stay on existing trails. Be aware of terrain where you do not belong, like steeper slopes, impassable swamps and other hazardous situations. Keep a watchful eye for sharp bumps, holes, ruts, obstacles, wildlife and other trail users.

Reading the terrain means to observe and understand the features and characteristics of the land on which you are riding. This includes surface composition, slope or camber of the trail, hills, rocks, tree stumps, streams, vegetation, fixed objects, etc.

Learn to read the trail as you ride. A wise rider watches well ahead on the trail. Know what is coming; be ready to react long before you get there. Be constantly alert for hazards and changing terrain conditions. Ride within your ability, not beyond your capabilities. Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control your ATV on such terrain. Adjust your speed to trail conditions and visibility. A responsible rider stays out of trouble not simply by handling the machine well, but by riding safely and avoiding risky situations in the first place.

Choosing Proper Speeds

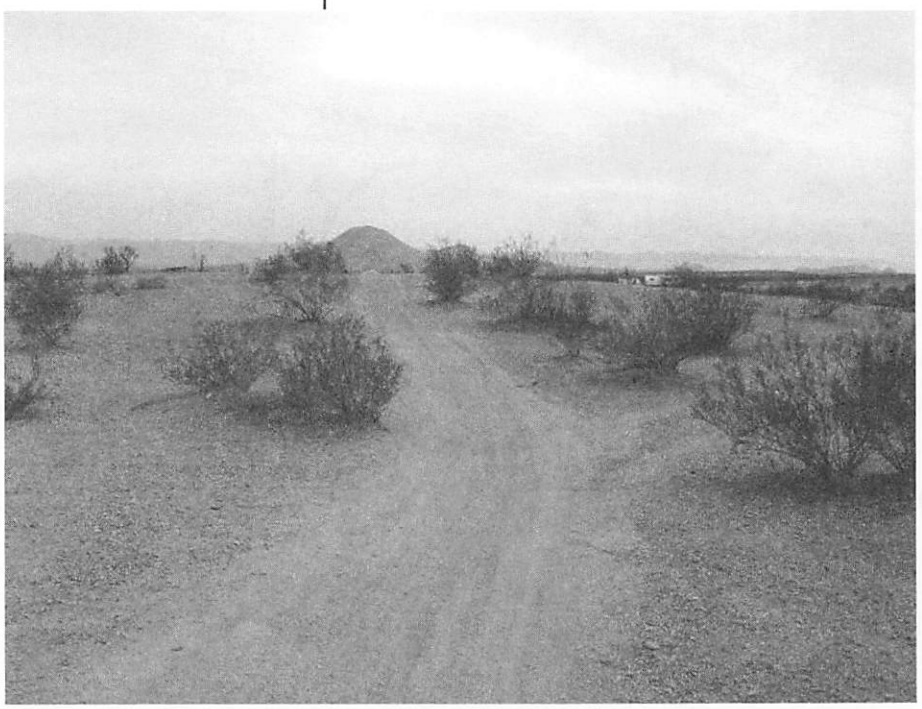
Always look well ahead and choose a speed that is proper for the terrain, visibility, operating conditions, and your experience.

By scanning far enough down the trail, you will be able to pick the best "lines" (or safest path of travel) around or over hazards or small obstacles. As you approach a hazard, do not fixate on it, but rather continue to search for other clues in the environment and adjust speed well in advance.

Using SIPDE

There is an acronym to remind you of the procedures for scanning trails and making riding decisions: "SIPDE." Each letter in "SIPDE" refers to steps needed to identify and respond to potential hazards in the lay of the land. Consider the consequences of possible choices and respond with the correct maneuvering skill.

S	**SCAN/SEARCH**	• Keep eyes moving • Search terrain • Check overall environment • Watch several seconds ahead • Avoid fixating on any one point
I	**IDENTIFY HAZARDS**	• Pick out specific problems • Consider: - Surface composition - Other trail users and wildlife - Stationary objects
P	**PREDICT WHAT WILL HAPPEN**	• Think of consequences • Consider riding techniques necessary • Predict results of choices
D	**DECIDE WHAT TO DO**	• Slow down so there is time to react • Pick the best line or path. Consider: - Traction - Obstacles within skill level - Visibility • Choose to reduce risk • Choose to stay well within personal limits and capabilities of the ATV
E	**EXECUTE THE DECISION**	• Adjust technique • Adjust speed • Adjust path of travel



Practicing SIPDE

An illustration of a rider's thought process is described in this example. In real-world ATV operation, the riding terrain constantly changes, requiring a rider to continually process information and make decisions. The following example shows how SIPDE can be used in this one "picture." This thought process must be seen as only a moment within a changing environment.

How might a rider specifically use SIPDE? What might he or she think? A "snapshot" entering a rider's eyes and brain is shown here. Let's eavesdrop on the thinking strategy.

- **Scan.** Open area with path of travel along hill crest. Narrow, dry path. Bumpy terrain, shrubs and obstacles. Drop-off next to trail's path.
- **Identify.** Narrow trail along ridge. Steep drop-off on sides. Poor visibility over crest. Dip in surface ahead.
- **Predict.** Other riders may be coming from the other direction, resulting in a collision. Riders may be coming from the sides. Getting too close to the edge of the trail could cause going over the drop-off. May have to react quickly. Not much escape area if trouble develops.
- **Decide.** Slow, stay in middle of trail. Look for approaching riders. Stand up for better visibility and adjust weight if needed for uneven terrain. If path is clear, gain momentum to get up next hill area.
- **Execute.** Release the throttle, apply both brakes. Weight up off seat—continuing to scan, search and think.

Trail Riding

Plan your trail ride carefully; do not take a trail that requires skill and techniques beyond your abilities or the capabilities of your ATV. Be careful going from a sunny to shaded trail. Ruts or rocks may "hide" in the shade and your eyes may not adjust quickly enough to see them in time. Gradient lenses can also help in these conditions. Standing up on the footrests will aid your ability to take on rough terrain. Remember, be prepared to meet oncoming traffic as most trails allow two-way travel.

Most properly designed trails are "outsloped" to allow rain to run off. This means you will need to keep your weight shifted into the slope.

If you must ride at night, be sure both headlight and taillight are working. Never stop just before or after a turn on the trail; pull well off the trail when you stop for a break. Be highly visible to other trail riders. At night if stopping on the trail, turn on a light so that other riders will see you.

Crossing Roads and Highways

ATVs are designed to be used OFF-ROAD ONLY. But on occasion you may find it necessary to cross a road or highway. This is common in farming areas where ATVs are used for work. A leading cause of accidents and fatalities among ATV riders is from riding on or crossing the road illegally or improperly. The hazards of road crossing cannot be overemphasized. Your ATV will handle differently on pavement and may be difficult to maneuver. Besides using caution and courtesy, follow your state's laws to cross a road.

If you must cross a road, use the following guidelines:

- Bring your ATV to a complete stop on the shoulder of the road. If you are riding in a group, have the first rider (leader) dismount and watch for traffic as he waves the group across the road. Have the last rider dismount after crossing and watch traffic for the group leader.
- Yield the right of way to all oncoming traffic. Look both ways.
- Cross the road at a 90° angle where there are no obstructions and your visibility is good.
- Make sure you know your state's laws and regulations before you cross any road.
- Remember, crossing roads improperly or illegally riding on the road is a major cause of serious accidents and fatalities to ATV users, so use extra caution.

Always assume that drivers DO NOT SEE YOU, since most drivers look for cars, not ATVs.

Riding Different Terrain

Sand Dunes

Dune riding offers great thrills and fun, but certain safety precautions are necessary to fully enjoy this type of terrain. Make sure your ATV is equipped with an antenna flag so others can see you better. The safety flag should be a bright color and the antenna at least 10 feet from ground to tip (with the tip lighted at night).

Dunes shift in size and shape. Drop offs can be created in a matter of hours. NEVER assume that what you rode on yesterday will be the same today. When the wind blows, the tracks you left ten minutes ago could vanish; the path you traveled a few hours ago can require a completely different riding strategy.

Assume that wet sand is unstable and could be quicksand. Do not attempt a crossing unless you know it is a safe area.

Avoid riding on vegetation since it helps stabilize the dunes and may also hide an obstacle or hazard. Be aware of "slipface" dunes which have a gradual incline on one side (usually the windward side) and nearly a straight drop-off on the other side (leeward). Be careful of "razorbacks" which have a steep angle on both sides. When riding up a dune, be prepared to make a U-turn if there is a drop-off. Dunes may vary in shape, size and direction. Learn the characteristics of the dune system in which you are riding.

Be extra careful when the sun is directly overhead because there are no shadows to indicate holes, drop-offs or changes in terrain. A three-to-four-inch heat haze can appear on top of the sand on warm, sunny days, creating an illusion that the surface is level where instead large bumps and holes may exist. A wise rider will travel slower under these conditions. A gradient (dark at top and clear at bottom) or dark lens in your goggles can help distinguish dips, drops and holes in the sand. Wear only clear lenses at night. Remember, night riding demands extra caution; it is best to slow down. When stopping for a rest, day or night, park at the crest of a dune. You will be more visible and have a better view.

Riding Through Mud and Water

Your ATV is equipped to ride through mud and shallow water, but you should avoid water crossings where you might cause damage to stream beds and fish spawning grounds, or where you might cause erosion to the banks of a stream or creek. This precaution not only adds to your own personal safety and fun, but it preserves the environment for others to enjoy as well.

If you are riding through mud and water, remember the footrests may become slippery. Remember, water levels may change from hour to hour. Safely determine the depth of the water or mud before riding through it. If in doubt, use a stick to poke in the water to help you determine its depth.

Never operate your ATV in fast-flowing water or in water deeper than that specified in your owner's manual. Typically, smaller ATVs may ford up to eight inches, larger ATVs up to 12 inches of water. Check your owner's manual to find out the maximum depth your ATV can negotiate safely.

If you cross a stream, or go up and down stream banks, use an established ford or ride where the banks have a gradual incline. This will help minimize the impact on the stream bank.

Your body position is very important when riding in mud or water. To maintain proper balance or maximum traction, be prepared to shift your weight in any direction. You may find it necessary at times to rock the ATV from side to side to work it out of a hole. Remember to continue to search and scan as you ride through mud or water; watch carefully for submerged obstacles.

Proceed at a slow, steady speed, avoiding obstacles and slippery rocks. Do not ride through unfamiliar water too quickly. Mud and deep water may slow the ATV abruptly and could cause loss of control if you enter too swiftly. Use a moderate speed with higher than usual engine speed. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the linings.

After riding in water, be sure to drain any trapped water by removing the drain screws (if equipped; check your owner's manual). Clean your ATV with fresh water if you have ridden in or near sea water.

To prevent loss of traction in mud or snow, allow the tires to rotate at a speed that enables their knobs to "bite." Do not spin the tires quickly; they will only dig a hole, splatter you with mud, and you will not travel any faster. Watch for mud build up on the engine, chain, and the rest of the ATV.

Snow Riding

Riding on firm snow can be great fun. However, riding in soft snow, under the wrong conditions, can be damaging to the terrain. In some areas, snow can actually form a thermal blanket over the soil below, keeping it from freezing. If you go through the snow layer you can damage the wet soil below and even get your ATV stuck. Since some winter ATV riding areas may be cropland the rest of the year, you could cause problems for the local farmers and landowners. Ride only on firm snow or groomed trails and be sure you have the landowner's permission.

Another thing to be aware of is that while a hard frozen trail may be nice at the beginning of your ride in the morning, hours later and several miles out, the trail could be warmed by the sun, making it unusable for an ATV. Keep alert to weather conditions and know the forecast.

Careless and irresponsible riders can spoil it for everyone. Snowmobilers will get pretty upset (and rightfully so) when ATVs make tire grooves in the slushy snow and ruin their carefully groomed trails. Check with local law enforcement to see if ATVs are legal on the snowmobile trails in your area.

> Remember that private land open for ATVs and snowmobiles in winter may be cropland that is off limits the rest of the year.

Know who owns the land on which you ride. Get to know your local snowmobile club members. By working with them you can help preserve riding opportunities for yourself and fellow enthusiasts.

Another thing to remember when winter riding is to change your transmission oil to a lighter weight. If your ATV is liquid cooled, be sure your antifreeze/water is mixed to proper 50/50 solution (recommended by all manufacturers).

If you decide to ride across frozen lakes, be sure to check the ice thickness first. There should be enough ice present to support you and your ATV. Some lakes are also spring-fed; know the lake you are riding on or ask about it. A spring-fed lake can have areas of thick ice, but above a spring the ice can be very thin. Watch for areas of open water and thin-ice markers on these lakes. Respect the rights of others; avoid ice fishermen and skaters.

On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.

Avalanches

In some areas of the country, ATV riders may be riding in mountainous areas. Since one footstep can be enough to start an avalanche or "snowslide," an ATV is certainly capable of starting one as well. A responsible ATV rider would not ride in such high elevations during avalanche season.

Many potential avalanche or snowslide hazards will be posted and that area closed to travel. There are already enough perils in unknown areas—do not risk your life or the lives of your fellow recreationists in dangerous areas.

Winter Clothing

Riding an ATV during the winter requires extra body protection against lower temperature, moisture and the wind-chill factor. Keeping dry and warm on the winter trail is essential. While the thermometer may indicate a pleasant temperature outside, do not forget the "wind-chill factor," which indicates the cooling power of cold air on exposed flesh at various wind or ATV speeds. For example, if the temperature on a calm day is 10 degrees above zero and you are riding your ATV at 10 miles per hour, the "wind-chill" temperature is equal to four degrees below zero.

Select the right combination of clothing to keep you warm and dry. Your entire trip can be miserable if you are not wearing the proper clothing.

If you dress properly, moisture will evaporate from your body. If you become hot and your clothing traps the moisture, you will get cold. Clothing should be windproof and water-repellent. It should be snug so it does not get caught in the machine, but loose enough to permit freedom of movement and good blood circulation.

Inner Layer

The inner layer of clothing should be some type of underwear which ventilates or "breathes." Wear any light winter underclothing. (Thermal underwear is a good type to wear.) Pay special attention to covering arms and legs. A couple of light layers will work better than one heavy layer. Air will become trapped between the layers, which will act as insulation from the cold.

Second Layer

The second layer of clothing should provide comfort, utility, and durability—such as a wool shirt and heavy pants. In colder weather, put on a heavy sweater as well.

Winter Outerwear

Snowmobile suits can be perfect for ATV winter riding. They are built with a water-resistant shell with multi-layers, and lightweight inner lining. The outer layer should be loose-fitting. Reflective strips sewn to the outer garment or other items of reflective clothing will help make you more visible during long hours of darkness in the winter months.

> Nylon outerwear and HOT exhaust systems do not mix. Be sure exhaust guards are in place or you may melt your clothing!

Head Cover

Along with your helmet, you should wear a cap or some covering over your ears and head. Avoid the fixed-type face shields, as they may frost up.

A knit face mask is usually not necessary except in extreme cold or if no other face protection is available. A knit mask helps to reduce the possibility of frostbite.

> Never wear a loose scarf when riding an ATV. It may get caught in a moving part of the machine. It is better to use a turtleneck sweater or neck warmer.

Gloves and Mittens

When riding an ATV your hands are out in the airstream, and can become chilled very quickly. The sports of snowmobiling and skiing have brought some new types of very warm gloves. They are usually padded and have insulated type linings. These materials help pull moisture away from skin to aid in keeping hands warm. A light cotton liner or inner glove can help keep your skin from freezing if you must remove outer gloves to handle small items. An extra pair of gloves on a winter trip is a good addition to your survival kit.

Boots and Socks

Socks for winter riding should keep your feet dry and warm. They should not be so bulky that they make your boots too snug, which can cut off circulation and cause cold feet. Socks should allow your feet a little movement inside the boots, so a layer of air will help the feet breathe. If the weather is very cold, wearing two pairs of socks, one light pair under a heavy wool pair, is ideal.

Boots must also be capable of keeping your feet dry and warm even though you do little walking. Be sure that boots are not too tight; a little air between your foot and the boot will help as a thermal barrier. Some of the best winter footwear is designed for snowmobile riders.

The Effects of Alcohol, Drugs and Fatigue

Riding an ATV can be more demanding than driving a car. You have to be in good physical and mental condition to ride safely. Three things that keep ATV users from being in top shape for riding are alcohol, drugs and fatigue. Each affects the entire decision-making process of SIPDE.

Alcohol

Drinking and riding can be fatal. Consumer Product Safety Commission studies show that 30 percent (30%) of all ATV riders killed in ATV accidents had been drinking. 14 percent (14%) of all reported accidents with injuries indicated alcohol consumption by the operator. As you can see, **ALCOHOL AND ATVs DO NOT MIX.**

Losing Control

Alcohol sneaks up on you. Unlike other beverages and foods, alcohol does not have to be digested. Within minutes, it is absorbed into your bloodstream and passed to your brain. It quickly causes a slowdown of your physical and mental reactions. Though you may perform more and more poorly, the alcohol makes you feel as if you are riding better and better. In fact, small quantities of alcohol impair your ability to:

- Ride and scan the trail for multiple hazards.
- Perceive moving objects.
- React quickly and properly.
- Coordinate eye, hand, and foot movements.
- Maintain balance while maneuvering.
- Make good decisions.
- See clearly at night.
- Stay within capabilities.

Alcohol affects all the skills you need to ride safely. The amount of alcohol in your body is described as the "Blood Alcohol Concentration" or "BAC." Most states consider people intoxicated at a BAC of between .08 to .10 percent. Physical and mental reactions usually become impaired at a BAC of .05 percent.

The Effects of Alcohol
NUMBER OF DRINKS THAT IMPAIR MENTAL AND PHYSICAL ABILITIES

One to two drinks in the system —	Mental processes such as restraint, awareness, concentration and judgment affected; reaction time slowed; inability to perform complicated tasks.
Three to four drinks in system —	Depth perception, glare recovery, eye movement and focus affected; decreased judgment and control.
Five drinks in system —	Coordination deteriorates, loss of critical judgment, impaired memory and comprehension.

The American Medical Association (AMA) cites studies showing that at a BAC of .05 percent to .06 percent (a couple of drinks) will impair operating skills. According to the AMA, the risk of having an accident rises significantly at .05 percent. How much alcohol it takes to make you impaired or intoxicated depends on several factors:

- How many ounces of alcohol you have consumed
- How quickly you drink it (over what time period)
- How much you weigh
- Other medications in the body

A glass of wine, a mug of beer, or a shot of hard liquor is burned up and eliminated by the body in about an hour. When you drink at a rate greater than one drink an hour, alcohol starts to build up in your bloodstream. People who weigh between 140 and 180 pounds usually become legally intoxicated with four drinks in their systems. Those who weigh less than 120 pounds need only three drinks to become intoxicated. So if you are of average build, just a few drinks in an hour may put you at risk. The only safe BAC level is zero.

Unfortunately, there is nothing you can do to counteract the effects of alcohol. Neither coffee, showers, nor exercise can make you sober. All you can do is wait for your body to eliminate the alcohol. That takes time.

As stated before, a large number of all fatal injury ATV accidents are associated with alcohol use. In addition to the risk of injury and the resulting medical bills, repairs to the ATV are expensive. In some states you can get a ticket for "riding under the influence" on public lands, which can lead to stiff fines and lawyer's fees, not to mention possible jail time.

Other Drugs

Almost any drug puts an ATV rider at risk. Many over-the-counter prescription and illegal drugs have side effects like alcohol's, which affect the skills you need to ride safely. Tranquilizers and barbiturates, which are depressants, act like alcohol in your bloodstream. Even cold tablets and allergy pills can make you feel weak, dizzy and drowsy. They may also affect your vision, coordination and judgment.

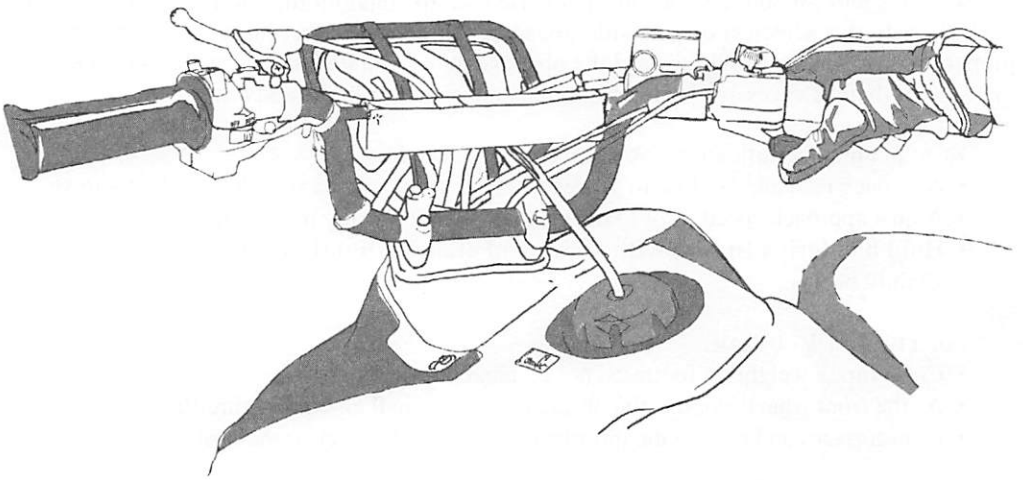
Marijuana decreases your ability to see at night and recover from headlight glare. Marijuana users can neither react as quickly as usual, nor operate the ATV as well. Amphetamines or cocaine, while they may increase your attentiveness temporarily, bring on extreme fatigue once they wear off. Furthermore, they produce a mild euphoria, which often causes riders to take foolish risks. Never consume drugs before or while operating an ATV.

Fatigue

Riding an ATV is more tiring than driving a car. When you plan a long trip, be mindful that you will tire much sooner than you would in a car. Remember that fatigue can affect your control of the ATV.

Here are some things you can do to keep from getting too tired:

- Protect yourself from the elements. Wind, cold, rain, and heat make you tire quickly. Dress appropriately for the conditions.
- Limit your distance and riding time until you know your limits.
- Take frequent rest breaks. Stop and get off the ATV. No one should go more than one hour without pulling over, stopping, getting off the ATV and walking around.



CHAPTER 8 QUIZ

1. "Reading the terrain" means to observe and understand the features and characteristics of the land.

   ☐ True ☐ False

2. The best "lines" to pick are those that include obstacles and uneven terrain.

   ☐ True ☐ False

3. ATV riders should consider the consequences of their choices, such as at what speed to travel and what path to take.

   ☐ True ☐ False

4. An ATV can easily travel through slippery mud and deep water.

   ☐ True ☐ False

5. Soft snow is more easily negotiated than firm snow.

   ☐ True ☐ False

6. Ice of any thickness will support your weight as well as the ATV's.

   ☐ True ☐ False

7. Riding on sand or on sand dune terrain requires special considerations.

   ☐ True ☐ False

8. ATV riders should make themselves visible to other riders.

   ☐ True ☐ False

9. A danger of crossing a road is that drivers in traffic fail to see ATVs.

   ☐ True ☐ False

10. The effects of alcohol create a negative influence on each step of the SIPDE process.

    ☐ True ☐ False

CHAPTER 9 RIDING OVER OBSTACLES

Obstacles should be avoided when possible. Smaller obstacles may be crossed if proper judgment and skills are utilized. Remember some obstacles are too large and should be completely avoided, even if it means turning around and taking a completely different path. Attempting to cross an obstacle improperly could cause a loss of control or result in your ATV overturning.

When crossing obstacles, follow the procedures listed in your owner's manual for your model of ATV. Keep your knees and elbows flexible. Use your legs and arms as shock absorbers to cross obstacles more comfortably. Keep your elbows bent out slightly and away from your body to retain a flexible riding posture for uneven terrain.

Mounds and ruts both act as obstacles. Be sure to stand on the footrests while crossing each. If only the wheel(s) on one side goes over the obstacle (a single-track obstacle), be prepared to shift your weight toward the obstacle and maintain balance as the ATV moves to one side. If there is excessive jarring from impact, bend your knees and arms more.

Keep in mind the following tips when crossing obstacles:

- Approach obstacle as close to 90 degrees as possible, while standing on the footrests.
- Adjust approach speed prior to the obstacle without losing momentum.
- Hold handgrips firmly, with knees and elbows slightly bent and body weight slightly back.

For a two-track obstacle:

- Concentrate weight on footrests, not on handlebars.
- As the front wheels contact the obstacle apply a small amount of throttle.
- Lean forward and release the throttle as the front wheels clear the obstacle.

For single-track (offset) obstacles:

- Use momentum to cross the obstacles.
- Do not apply throttle.
- Do not pull up on handlebars or attempt to loft the front wheels.

CHAPTER 9 QUIZ

1. Obstacles should be avoided if possible.

   ☐ True ☐ False

2. The larger an obstacle is, the easier it is to cross.

   ☐ True ☐ False

3. The best way to cross an obstacle is to keep your knees and elbows locked.

   ☐ True ☐ False

4. The SIPDE strategy can be applied in avoiding or crossing obstacles.

   ☐ True ☐ False

5. Mounds and ruts in the terrain are treated similarly to obstacles.

   ☐ True ☐ False

6. The faster an obstacle is crossed, the safer the maneuver is.

   ☐ True ☐ False

7. Weight shift is toward the obstacle when crossing a single-track obstacle.

   ☐ True ☐ False

8. Too much throttle could cause an accident when crossing an obstacle.

   ☐ True ☐ False

9. It is best to approach an obstacle as close to 90 degrees as possible.

   ☐ True ☐ False

10. You should check your owner's manual for the correct procedure for crossing obstacles.

    ☐ True ☐ False

RIDING ON HILLS CHAPTER 10

When riding just about anywhere, you will encounter some type of hills. An ATV can overturn more easily on extremely steep hills than on level surfaces or small hills. Being prepared and knowing what to do will help you on your journey. Always be sure to check your parking brake before riding in hilly areas.

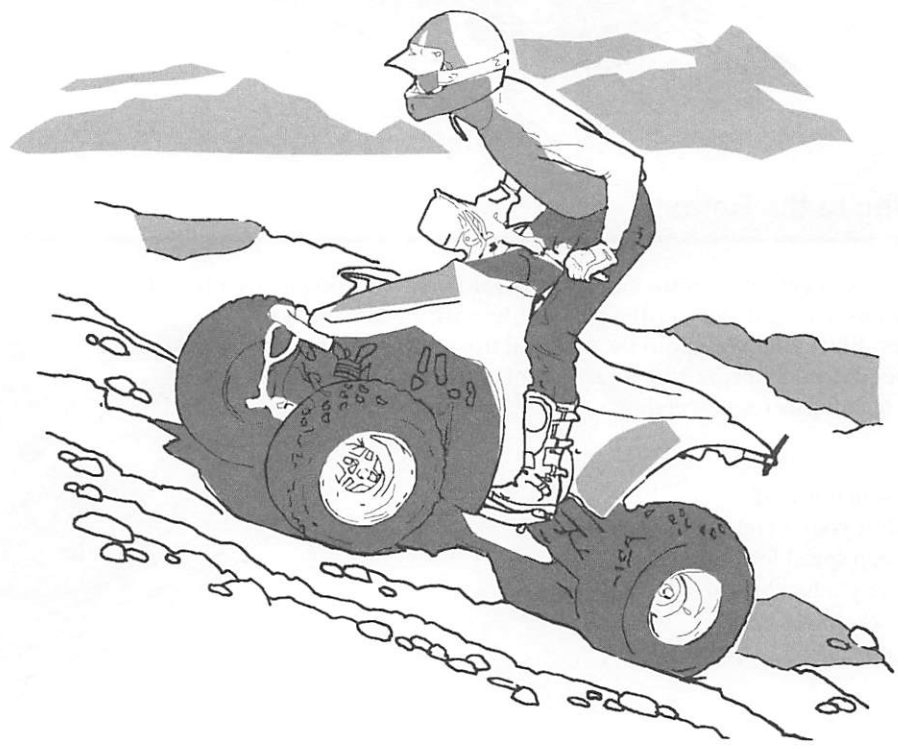
Going Up a Hill

Remember:

- Some hills are too steep for your abilities. Use your common sense. If the hill looks too steep, it probably is.
- Some hills are just too steep for your ATV regardless of your abilities.
- Never ride past the limit of your visibility—if you cannot see what is on or over the crest of a hill, slow down until you have a clear view.
- The key to being a good hill rider is to keep your weight uphill at all times.

Climbing hills improperly could cause loss of control or cause the ATV to overturn. Always follow proper procedures for your ATV contained in the owner's manual. When approaching an uphill climb you should:

- Keep your feet firmly on the footrests.
- Shift the ATV into a lower gear and speed up BEFORE climbing the hill so you can maintain momentum.
- When approaching the uphill climb, move way up on the seat and lean forward, or stand and position your torso over the front wheel(s).
- As you are climbing, you may need to shift to a lower gear to prevent lugging the engine or stalling. To shift into a lower gear on a hill, remember:
  — Keep your body weight forward as you prepare to shift gears. For steeper hills, lean forward as much as possible.



— Shift quickly while momentarily releasing the throttle; this will help keep the front wheels from lifting.

If you do not have enough power to reach the top of the hill, but still have forward momentum and enough room to turn around safely:

- Keep your weight uphill.
- Make a U-turn before you lose speed.
- Proceed downhill in a lower gear, keeping your weight to the uphill side.

If you are riding uphill and lose all forward momentum:

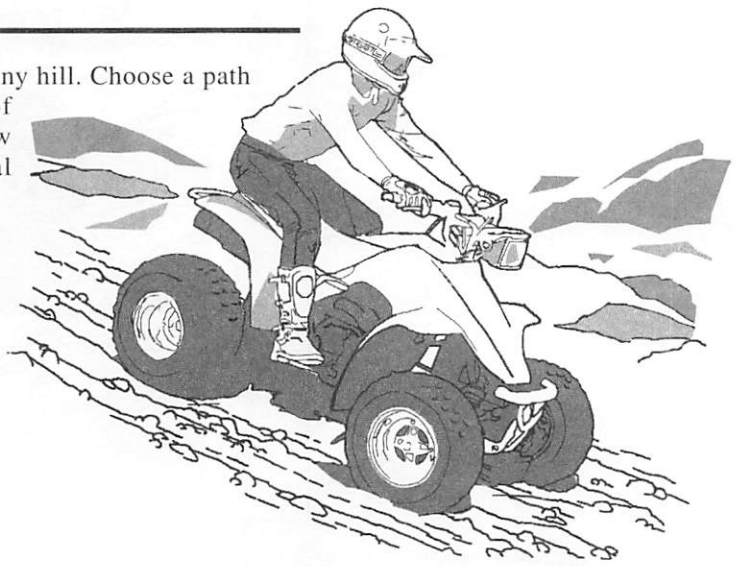
- Keep your weight uphill, and apply the brakes and come to a stop. Never allow the ATV to roll backward.
- Apply the parking brake while keeping your weight uphill.
- Dismount on the uphill side or to a side if pointed straight uphill, and follow the procedure described in your owner's manual.

Do not attempt to ride backward down a hill. Should you begin rolling backward, do not apply the rear brake abruptly. Using the rear brake only or abruptly could cause the ATV to roll over backward. If you begin rolling backward:

- Keep your weight uphill, and apply the front brake. If your ATV is a 4WD model, follow the procedure described in your owner's manual.
- When you are fully stopped, apply the rear brake as well. Apply the parking brake, dismount on the uphill side or to a side if pointed straight uphill, and follow the procedure described in your owner's manual.
- If the ATV continues to roll backward, dismount to the uphill side immediately.

Getting to the Bottom

Always check the terrain carefully before you start down any hill. Choose a path which is as straight downhill as possible with a minimum of obstacles. Shift your weight to the rear and use a low gear. Follow the procedures described in your owner's manual for special braking techniques for descending.



When going downhill:

- Shift your weight to the rear (uphill).
- Keep speed low.
- Use gradual braking.
- Use a lower gear.
- Look ahead.

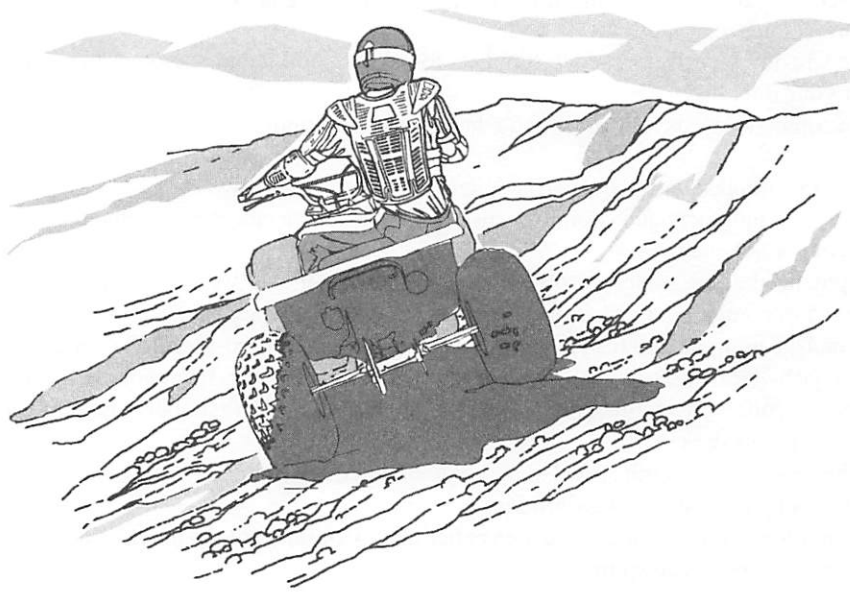
Traversing

When you go across a slope rather than directly up or down, it is called traversing. Sometimes when a hill is steep it is necessary to climb it or descend by traversing.

Traversing a slope is tricky. Avoid traversing slopes with excessively slippery, rough, or loose surfaces.

Here are some basic guidelines for traversing:

- Keep both feet firmly on the footrests.
- Lean your upper body uphill.
- When riding on soft terrain, you may need to gently turn your front wheel(s) uphill to keep your ATV on a straight line across the hill.
- If your ATV begins to tip, turn the front wheel(s) downhill if the terrain allows. If the terrain does not permit, dismount on the uphill side immediately.
- Avoid making sudden throttle changes.



CHAPTER 10 QUIZ

1. You should check your parking brake before riding on hills.

   ☐ True ☐ False

2. No hill is too steep for an ATV.

   ☐ True ☐ False

3. Use a high gear to go up and down hills.

   ☐ True ☐ False

4. When descending a hill, you should shift your weight to the rear.

   ☐ True ☐ False

5. If a hill is bumpy with ruts, you should stand on the footrests with your knees and arms slightly bent.

   ☐ True ☐ False

6. Hills with slippery surfaces or loose terrain should be avoided.

   ☐ True ☐ False

7. Making sudden throttle adjustments when traversing a hill can be dangerous.

   ☐ True ☐ False

8. If it becomes necessary to stop on a hill, dismount on the downhill side.

   ☐ True ☐ False

9. To find out how to turn around on a hill if you lose momentum, you should check your owner's manual.

   ☐ True ☐ False

10. Steeper hills require more weight shift than do slight inclines.

    ☐ True ☐ False

CHAPTER 11 SAFE RIDING PRACTICES

You should know safe riding practices and be aware of the environmental concerns shared by responsible riders. Being prepared and knowing how to survive is your best safeguard in case of an emergency like a breakdown or sudden storm.

Plan Ahead

Good planning, following the recommended maintenance schedule of your ATV, traveling in the company of others and practicing safe riding habits should eliminate most emergencies.

If you decide to ride in areas where a breakdown could threaten your survival, you should prepare yourself by learning survival techniques. In many states survival information is available through state departments or agencies involved in outdoor recreation. Use these and other sources to gather survival information appropriate to the area you plan to ride.

Before you leave:

- Prepare and secure emergency supplies, tools, first aid kit and any other items necessary for your ride.
- Let someone know your route and when you should return.

If you are stranded and you determine help is too far away to walk:

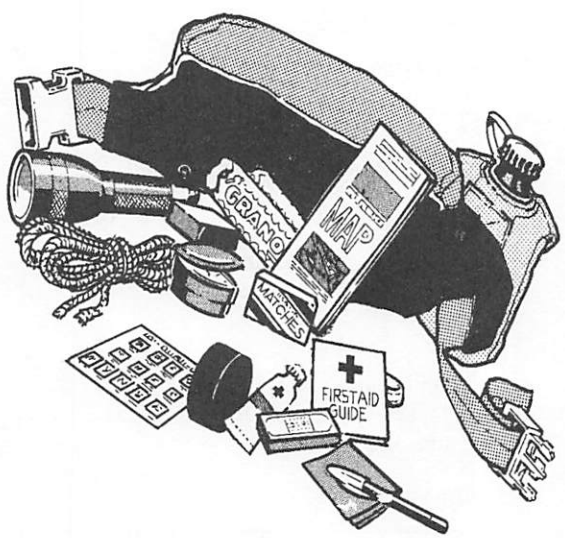
- Use good judgment and common sense. When facing an emergency, remain calm—panic is your worst enemy.
- If you need a fire, select a protected area away from the ATVs and any overhanging branches containing dry leaves or snow. Start your fire using small dry sticks and branches, gradually adding larger pieces of wood as required. Before leaving your emergency shelter make sure all ashes are smothered. One hot ash from your fire could destroy your entire riding area. If you have to spend the night, collect enough wood before it gets dark.
- Whenever you are both stranded and injured, attend to injuries first, then sit down and think out solutions and possibilities.
- Do not travel on foot in strange areas after dark. Conserve all the energy you can because it will help keep you warm.

Survival Kit

A survival kit is an absolute necessity when planning a long ride on your ATV. Whether with a group or just a friend, a survival kit should be included with your supplies on each ride.

Prepare your kit according to the local conditions. It should easily fit into a can or other small, waterproof container. Just like the emergency food supply and tool kit, this survival kit applies to all terrain, from the woods to the desert.

Whenever you plan an extended ride or you are going to go farther than you can walk back



in a reasonably short period of time, you should carry at least the following in your fanny-pack (a cell phone would be a good idea if you have one):

- Trail food
- Water purification tablets
- An area map
- A good, shock-resistant compass
- Lighter or waterproof matches
- Small signal mirror
- Emergency space-blanket
- Compact first aid kit
- 25 feet of sturdy rope
- Five feet of rolled duct tape
- Small flashlight
- Pencil/pen and paper
- Hand axe
- Signal flares
- And always, without exception, CARRY WATER

Local camping, backpacking or military surplus stores are good sources for quality, lightweight products that are well-suited to the rigors of trail riding.

First Aid

ATV accidents can cause bodily injury as well as equipment damage. The most hazardous situation occurs when a person is injured and alone, miles from help. Any injury can be serious if handled carelessly. You may have to care for your own injuries and someone else's trauma when you least expect it.

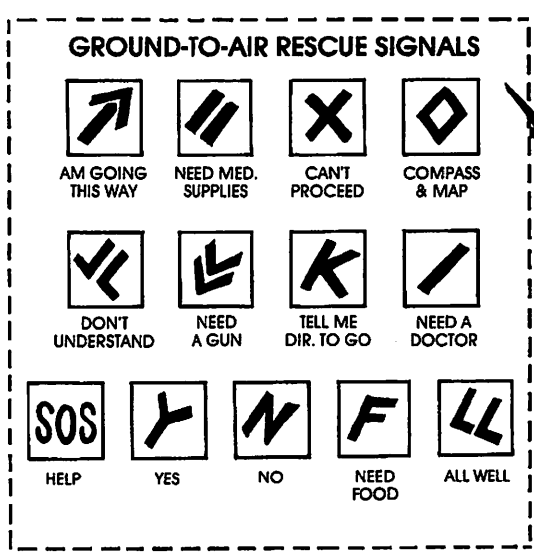
A first aid kit is easy to make and should contain at least the following: six band-aids; two, two-inch compresses; four, four-inch compresses; four triangular bandages; one roll of two-inch gauze; one roll of one-inch gauze, and one roll of one-inch adhesive tape.

Select a small waterproof container to store the items listed on your ATV.

> Never remove a helmet from an injured rider unless necessary. Severe injury could result if done improperly.

In case of an emergency, be calm, firm and reassuring to the injured person. Do as much as you can for them and, if possible, send others for help.

For your own benefit and that of your friends, you should learn basic first aid procedures. Your local Red Cross will give you information on first aid classes in your area.



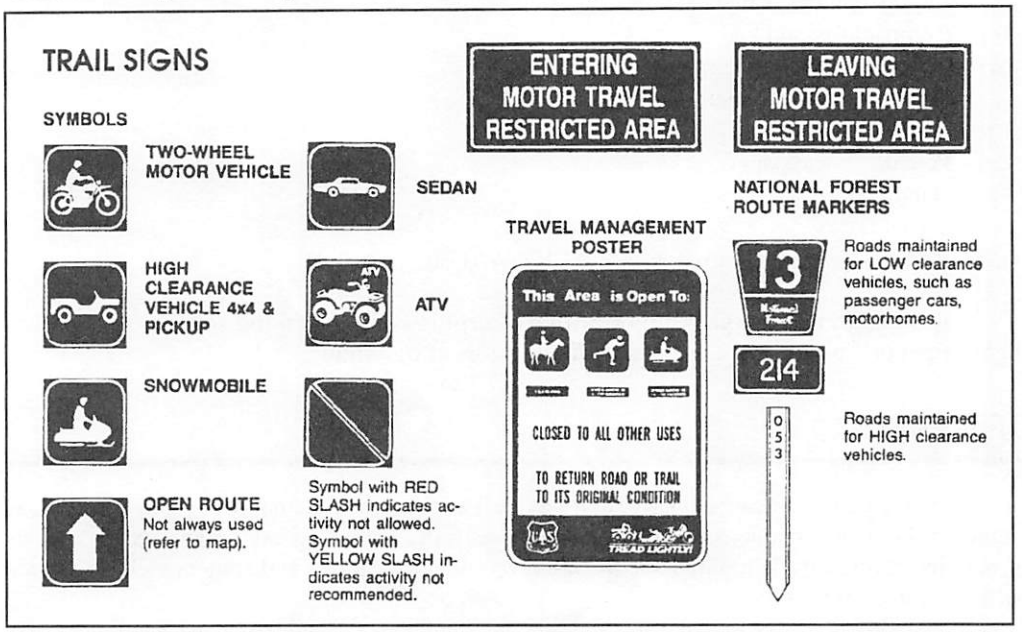
Ground-to-Air Rescue Signals

If you find yourself in a position where you have to communicate with an airplane, use these signals. The markings should be at least 18 feet long and three feet wide so they can be easily read from the air. The markings can be stamped in the snow, or logs, rocks or branches positioned to form signals.

Clip this handy guide out and carry it in your survival kit.

Trail Signs

When riding your ATV you may encounter different types of trail signs. The signs are designed to help trail riders by supplying needed information about the area. Standardized ATV trail signs are being developed by the U.S. Forest Service. Until they are posted, it is best to follow the snowmobile or off-highway vehicle signs where applicable and lawful. Below are some of the signs currently used in some areas; it is to your benefit to learn them.


TRAIL SIGNS
SYMBOLS
TWO-WHEEL MOTOR VEHICLE
SEDAN
HIGH CLEARANCE VEHICLE 4x4 & PICKUP
ATV
SNOWMOBILE
OPEN ROUTE
Not always used (refer to map).
Symbol with RED SLASH indicates activity not allowed. Symbol with YELLOW SLASH indicates activity not recommended.
ENTERING MOTOR TRAVEL RESTRICTED AREA
LEAVING MOTOR TRAVEL RESTRICTED AREA
TRAVEL MANAGEMENT POSTER
This Area is Open To:
CLOSED TO ALL OTHER USES
TO RETURN ROAD OR TRAIL TO ITS ORIGINAL CONDITION
TREAD LIGHTLY!
NATIONAL FOREST ROUTE MARKERS
13
Roads maintained for LOW clearance vehicles, such as passenger cars, motorhomes.
214
053
Roads maintained for HIGH clearance vehicles.

Laws and Regulations

Laws provide an understanding between ATV riders and enforcement officers concerning the proper way to act while riding off road. These laws help protect people, property and your sport of ATV riding.

You can encourage other ATV operators to follow local and state laws by practicing them yourself. In this way ATV riders can set a good, positive example and, to some extent, police themselves on the trails.

Your ATV is an OFF-ROAD VEHICLE and is not designed for street or highway use. Many states require that you register your ATV through the Department of Motor Vehicles or other licensing body. ATVs used for agricultural or utility purposes may be subject to different provisions than recreational vehicles. Check when buying your ATV. Your dealer should know the laws and can often help you with registration. Fines and/or penalties for riding an unregistered ATV can be expensive, and you take the risk of having your ATV impounded.

Some states use the off-road registration fees for ATV trails and facilities. By paying the registration fee, you are helping to buy more land or maintain the off road areas in your state. Each state's registration requirements vary. Before planning an out-of-state ride, learn that area's laws.

Tread Lightly!

Being a responsible ATV rider means not only protecting yourself from potential hazards, but protecting the environment where you ride. It is your responsibility to avoid accidents by riding within your skills at safe speeds and by not performing unsafe maneuvers. It is just as important to do all you can to preserve the environment when you ride and to be aware of the damage to the environment if you ride irresponsibly.

The best way to protect the environment is to stay on established trails. Using marked trails limits any potential damage to the recreational area.

Enjoying nature is a big part of ATV riding. Riding off road brings you close to sights and sounds you would not experience from the highway or paved road. Protect your right to enjoy Mother Nature by riding responsibly and protecting the environment at all times.

Tread Lightly!
Riding behavior that harms the land is self-defeating and irresponsible. Learn to protect and preserve your riding areas. In other words, Tread Lightly!

- **Travel and recreate with minimun impact**
  By traveling only where motorized vehicles are permitted you will minimize your impact.
- **Respect the environment and the rights of others**
  Help keep trails accessible for recreation by respecting the rights of hikers, skiers, campers and others to enjoy their activities.
- **Educate yourself, plan and prepare before you go**
  By educating yourself and obtaining travel maps and regulations from public agencies, complying with signs and barriers, and asking permission to cross private property you ensure your impact is minimized.
- **Allow for future use of the outdoors, leave it better than you found it**
  By avoiding streams, lakeshores, meadows, muddy trails, steep hillsides, and wildlife and livestock you allow for the future use of the great outdoors.
- **Discover the rewards of responsible recreation**
  Riding responsibly helps protect the environment and preserves opportunities to enjoy your vehicle.

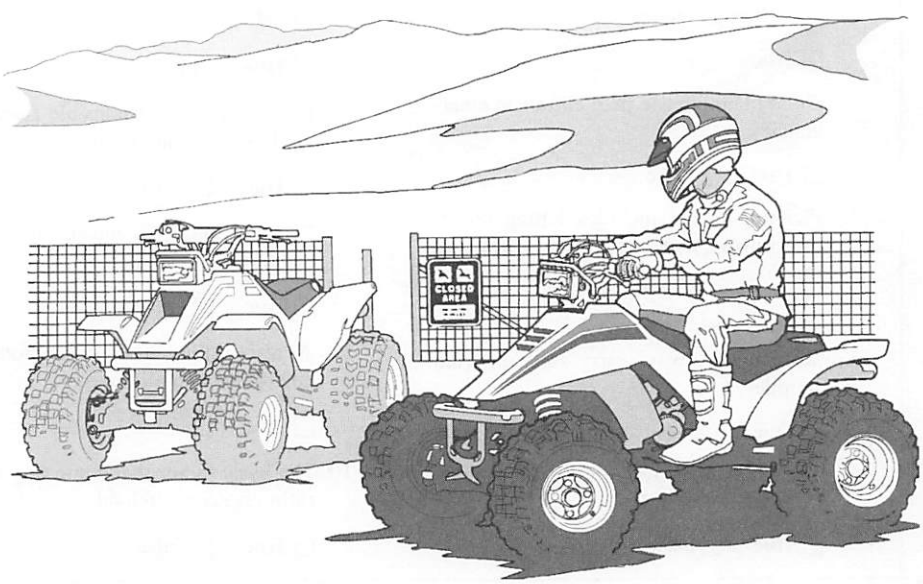
You and the Rest of the World

There is one fundamental factor that controls your ATV riding—access to land. Developing and maintaining riding opportunities includes getting along with private landowners, public land managers and people you meet on the trails.

Mostly, it takes common courtesy and consideration.

Here are a few hints for getting along with others and keeping your riding areas open:

- Know who owns the land you are using. Get permission to use it if needed. Stay on marked trails if they are provided.
- Keep your ATV quiet. Do not make your exhaust system noisy — there is nothing that people hate more than a loud off-road vehicle. Keep the spark arrester in place.
- Obey closure signs; that land is posted for a reason.
- Always leave gates and fences as you found them.
- Leave the area as clean or cleaner than you found it. Pick up litter that may be lying about.
- Be courteous when you meet others on the trails. Pull off and give right-of-way to horseback riders or hikers. In fact, it is best to shut off your engine when you meethorseback riders; a panicked horse is a danger to you and its rider.
- Remember to remove your helmet when talking to a landowner or someone you meet on the trail. Be friendly and honest with them and keep your helmet visible so it can help make a good impression.



Finding Places to Ride

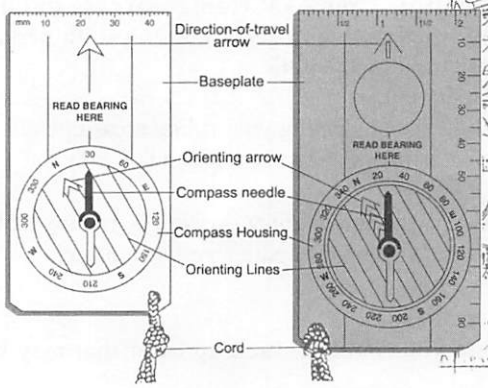
How do you find good places to ride?

Start by asking your ATV dealer. Where do other customers ride? Who owns the land? What are the regulations for using the land? ATV clubs may also provide a way of working with others to find good riding areas.

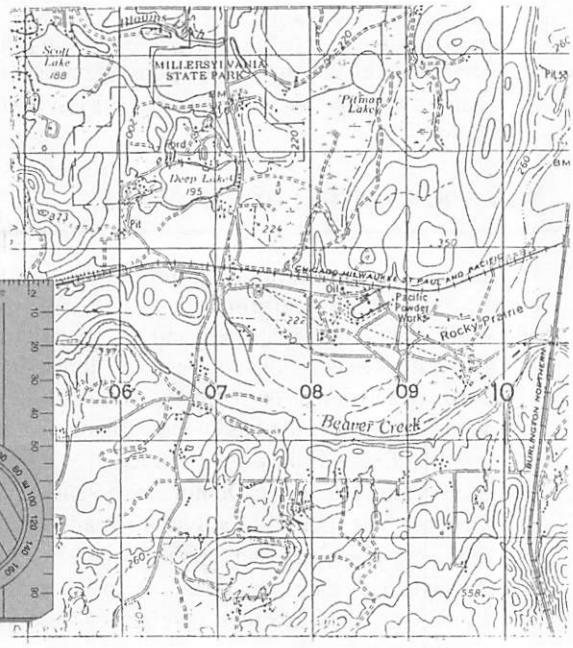
If you are looking on your own, topographic maps can be a good way to find open land with trails. Find out who owns the land and whether they mind you using it. You can develop a network of good riding areas this way.

Some sources for finding places to ride are:

- Your ATV dealer
- ATV clubs or associations
- State maps (topographical and feature)
- Snowmobile clubs
- American Motorcyclist Association Trail Guide
- U.S. Forest Service
- Bureau of Land Management



Orienteering Compass



Topographic Map (section)

CHAPTER 11 QUIZ

1. Carrying a map and compass is not a good riding practice.

   ☐ True ☐ False

2. Good planning can help eliminate emergencies.

   ☐ True ☐ False

3. Planning ahead includes letting someone know your route and when you should return.

   ☐ True ☐ False

4. You should always carry some first aid supplies.

   ☐ True ☐ False

5. You should always remove the helmet from an injured rider.

   ☐ True ☐ False

6. In an emergency, "panic" is your best friend.

   ☐ True ☐ False

7. Part of being a responsible rider is taking basic first aid training.

   ☐ True ☐ False

8. "Tread Lightly!" means only riding small ATVs.

   ☐ True ☐ False

9. A responsible ATV rider protects the environment at all times.

   ☐ True ☐ False

10. The basic factor that controls your ATV riding is access to land.

    ☐ True ☐ False

CONCLUSION CHAPTER 12

ATV sales have grown steadily in recent years to over 800,000 units per year. In addition to recreational use, ATVs serve agriculture, business, commercial industry, and government and law enforcement agencies with on-the-job transportation as well as off-duty recreation transportation. ATVs are fun and useful machines. By learning to operate your ATV properly and consistently practicing safe riding techniques, you can look forward to years of rewarding enjoyment of the sport.

Remember to always follow the safety recommendations provided by the ATV manufacturers and your riding will not only be safer, but more fun too!

QUIZ ANSWERS

CHAPTER 1

1.	T	6.	T
2.	T	7.	F
3.	T	8.	T
4.	T	9.	T
5.	F	10.	T

CHAPTER 2

1.	F	6.	F
2.	T	7.	F
3.	T	8.	T
4.	F	9.	F
5.	F	10.	T

CHAPTER 3

1.	T	6.	F
2.	T	7.	T
3.	F	8.	T
4.	T	9.	F
5.	F	10.	T

CHAPTER 4

1.	T	6.	F
2.	F	7.	T
3.	T	8.	F
4.	T	9.	F
5.	F	10.	T

CHAPTER 5

1.	T	6.	T
2.	T	7.	F
3.	T	8.	T
4.	F	9.	F
5.	T	10.	T

CHAPTER 6

1.	T	6.	T
2.	T	7.	F
3.	F	8.	F
4.	T	9.	F
5.	F	10.	T

CHAPTER 7

1.	T	6.	T
2.	F	7.	T
3.	T	8.	T
4.	T	9.	T
5.	F	10.	T

CHAPTER 8

1.	T	6.	F
2.	F	7.	T
3.	T	8.	T
4.	F	9.	T
5.	F	10.	T

CHAPTER 9

1.	T	6.	F
2.	F	7.	T
3.	F	8.	T
4.	T	9.	T
5.	T	10.	T

CHAPTER 10

1.	T	6.	T
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CHAPTER 11

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ATV Safety Alert

The Consumer Product Safety Commission has concluded that ALL-TERRAIN VEHICLES (ATVs) may present a risk of DEATH or SEVERE INJURY in certain circumstances. Accidents may occur for many reasons:

- More than 2,221 people, including many children, have died in accidents associated with ATVs since 1999.*
- Many people have become severely paralyzed or suffered severe internal injuries as a result of accidents associated with ATVs.
- Every month thousands of people are treated in hospital emergency rooms for injuries received while riding an ATV.

You should be aware that AN ATV IS NOT A TOY AND CAN BE HAZARDOUS TO OPERATE. An ATV handles differently from other vehicles, including motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers such as turning and driving on hills and over obstacles, if you fail to take proper precautions.

TO AVOID DEATH OR SEVERE PERSONAL INJURY:

- ALWAYS READ THE OWNER'S MANUAL CAREFULLY AND FOLLOW THE OPERATING PROCEDURES DESCRIBED. PAY SPECIAL ATTENTION TO THE WARNINGS IN THE MANUAL AND ON ALL LABELS.
- NEVER OPERATE AN ATV WITHOUT PROPER INSTRUCTION. TAKE A TRAINING COURSE. BEGINNERS SHOULD COMPLETE THE TRAINING COURSE DESCRIBED BELOW.
- ALWAYS FOLLOW THESE AGE RECOMMENDATIONS:
- A CHILD UNDER 12 YEARS OLD SHOULD NEVER OPERATE AN ATV WITH ENGINE SIZE 70CC OR GREATER.
- A CHILD UNDER 16 YEARS OLD SHOULD NEVER OPERATE AN ATV WITH ENGINE SIZE GREATER THAN 90CC.
- NEVER ALLOW A CHILD UNDER 16 YEARS OLD TO OPERATE AN ATV WITHOUT ADULT SUPERVISION. CHILDREN NEED TO BE OBSERVED CAREFULLY BECAUSE NOT ALL CHILDREN HAVE THE STRENGTH, SIZE, SKILLS OR JUDGMENT NEEDED TO OPERATE AN ATV SAFELY.
- NEVER CARRY A PASSENGER ON A SINGLE-RIDER VEHICLE. CARRYING A PASSENGER MAY UPSET THE BALANCE OF THE ATV AND MAY CAUSE IT TO GO OUT OF CONTROL.
- ALWAYS AVOID PAVED SURFACES. ATVS ARE NOT DESIGNED TO BE USED ON PAVED SURFACES AND PAVEMENT MAY SERIOUSLY AFFECT HANDLING AND CONTROL.
- NEVER OPERATE AN ATV ON A PUBLIC ROAD, EVEN A DIRT OR GRAVEL ONE, BECAUSE YOU MAY NOT BE ABLE TO AVOID COLLIDING WITH OTHER VEHICLES. ALSO, OPERATING AN ATV ON A PUBLIC ROAD MAY BE AGAINST THE LAW.
- NEVER OPERATE AN ATV WITHOUT AN APPROVED MOTORCYCLE HELMET, EYE PROTECTION, BOOTS, GLOVES, LONG PANTS AND A LONG-SLEEVED SHIRT OR JACKET.
- NEVER CONSUME ALCOHOL OR DRUGS BEFORE OR WHILE OPERATING AN ATV.
- NEVER OPERATE AN ATV AT EXCESSIVE SPEEDS. GO AT A SPEED WHICH IS PROPER FOR THE TERRAIN, VISIBILITY CONDITIONS AND YOUR EXPERIENCE.
- NEVER ATTEMPT TO DO WHEELIES, JUMPS OR OTHER STUNTS.
- ALWAYS BE CAREFUL WHEN OPERATING AN ATV, ESPECIALLY WHEN APPROACHING HILLS, TURNS AND OBSTACLES AND WHEN OPERATING ON UNFAMILIAR OR ROUGH TERRAIN.
- NEVER LEND YOUR ATV TO ANYONE WHO HAS NOT TAKEN A TRAINING COURSE OR HAS NOT BEEN DRIVING AN ATV FOR AT LEAST A YEAR.

Training Course

Anyone who purchased a new ATV after December 30, 1986, and everyone in the purchaser's immediate family who is within the recommended age group for the ATV purchased, is entitled to take a training course at no additional charge. Others can take the training course for a small fee. Ask an authorized dealer for the details or call 800.887.2887 for training information.

FOR MORE INFORMATION ABOUT ATV SAFETY, CALL THE CONSUMER PRODUCT SAFETY COMMISSION AT 800.638.2772 OR THE ATV DISTRIBUTORS' SAFETY HOTLINE AT 800.852.5344.

*As of the CPSC 2003 Annual Report of Deaths and Injuries, issued January 2005.

NOTES

NOTES

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www.atvsafety.org

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RIGHT RIDER

is produced as a public service through
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Motorcycle Industry Council
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SVIA
Specialty Vehicle Institute of America

ARRA
Americans for Responsible Recreational Access
www.responsible recreation.org

www.nohvcc.org
National Off-Highway Vehicle Conservation Council, Inc.
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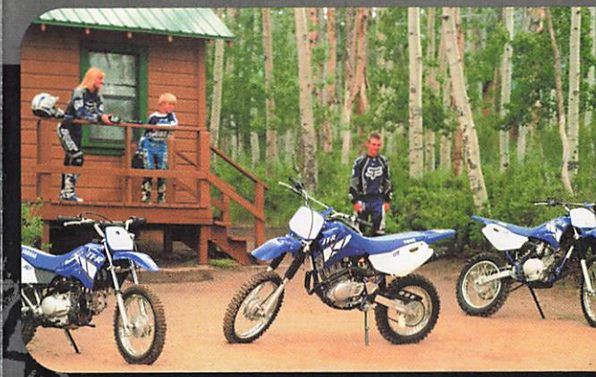
RIGHT RIDER

ride RESPONSIBLY and protect YOUR RIGHT to ride!



- Know where you're permitted to ride and where you're not. Respect private property and closed areas.
- Share the trails and make friends with other trail users.
- Be part of the solution. Volunteer to help maintain trails and protect our natural resources. Join an organized club in your area.
- Protect your right to ride. Remember, less sound equals more ground.
- If you "pack it in, pack it out." Trash is an eyesore and it attracts scavengers that endanger other wildlife.
- Remember, even biodegradable materials such as food scraps take time to break down.

< SCOTT SUMMERS

Five-time GNCC National Champion
Four-time AMA National Hare Scrambles Champion

"When I'm not racing, I enjoy trail riding with my Dad and friends. We understand the importance of riding bikes that are quiet, following the rules and staying on designated trails. We try to make a good impression as motorcyclists so we can keep our favorite riding spots accessible for the future."

Call ATV Enrollment Express toll-free at (800) 887-2887 to find out if you are eligible for free ATV training or to enroll in the ATV RiderCourse®.

RIDE RIGHT on Designated Trails and Areas

- Know where you're permitted to ride.
- Respect closed areas and private property.
- Avoid wet areas and waterways. They are a vital resource for many plants and animals.
- If you must cross water, ride carefully and only at designated spots.
- Remember, cutting switchbacks and taking shortcuts damages trails and causes erosion.

Ride RIGHT WITH OTHERS on the Trail

RESPECT THE RIGHTS OF ALL TRAIL USERS

- Respect the rights of others on trails. One little blip of the throttle can leave a shower of gravel or a cloud of dust - and an enemy behind you.
- Respect seasonal closures. Animals need time to reproduce and raise their young undisturbed.
- View animals from a distance. When they flee they use valuable energy reserves.

RIGHT RIDER

Off-highway riding is a great family experience. Teach kids early the smart and responsible way to ride.

Call toll-free (877) 288-7093 for information or to enroll in the MSF DirtBike School℠. Some sites provide bikes and gear.

REMEMBER, YOU'RE AN AMBASSADOR FOR THE SPORT!

- Riding off trails can destroy animal burrows and spread noxious weeds that damage habitats and kill native plants.

- Slow down then stop when you meet riders on horseback. Avoid sudden movements. Take your helmet off, while stationary, so the horse can recognize you as a human.

TRAVIS PASTRANA >

AMA 125 National Motocross Champion [2000]

AMA 125 Eastern Regional SX Champion [2001]

"Trail riding is not Supercross... it's not the X-Games...so be smart; keep the noise down and help keep our riding areas open."

Make The RIGHT IMPRESSION

- Let's face it, noise annoys.
- Know the sound limits where you ride. Many clubs have sound meters to help you keep it down.
- Maintain your exhaust system. Remember, noise doesn't equal horsepower. Too little exhaust back-pressure can actually cause less power and engine damage.
- Keep your RPM and speed down and steady when you're around non-riders.
- Always use a spark arrester. It doesn't sacrifice power, but can save the forest from fires.
- Protect your right to ride. Remember, less sound equals more ground. <dB=>θ

WHAT YOU CAN DO

We need your help to accomplish these important goals. To find out what you can do to help ensure that current and future generations will enjoy the benefits of outdoor recreation, please visit our website.

WWW.ARRA-ACCESS.COM

Who we are:

The outdoor recreation industry and volunteer organization promote environmental responsibility and safety through continuing member education, public service advertising and workshops for land planners and managers on minimizing environmental impact.

ARRA's member organizations include*:

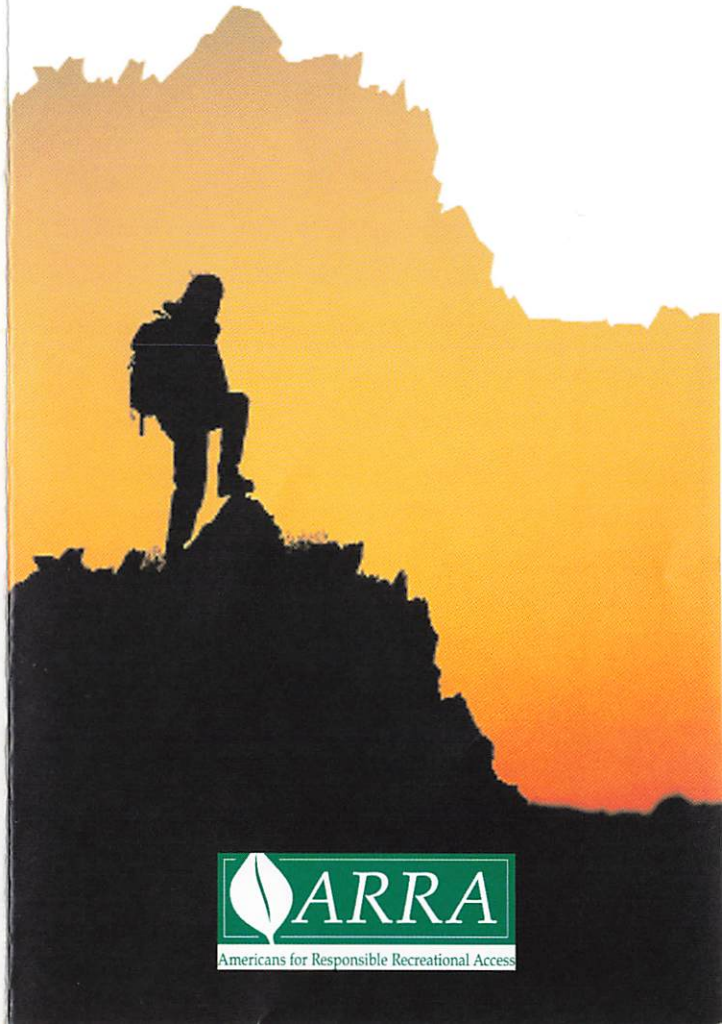
- American Council of Snowmobile Associations
- American Horse Council
- American Motorcyclist Association
- Motorcycle Industry Council
- National Marine Manufacturers Association
- National Off-Highway Vehicle Conservation Council
- Personal Watercraft Industry Association
- Specialty Vehicle Institute of America

*For a complete listing, please go to our website (www.ARRA-access.com)

WWW.ARRA-ACCESS.COM

ARRA
Americans for Responsible Recreational Access
600 Thirteenth Street, NW Suite 790
Washington, D.C. 20005

PUBLIC LAND: IS YOUR ACCESS FADING AWAY?



ARRA
Americans for Responsible Recreational Access

OUR MISSION:

AN EFFECTIVE VOICE IN WASHINGTON

Americans for Responsible Recreational Access (ARRA) represents the interests of millions of families and individuals who are outdoor recreation enthusiasts. Outdoor recreation is one of the nation's fastest growing forms of exercise and relaxation and our members have a vital interest in the responsible use and wise management of our natural resources. Representing all 50 states, these Americans believe that recreation is a legitimate use of our nation's public lands and waters and want to ensure that opportunities for diverse recreation on these lands and waterways are available today and for future generations.

ARRA is the Washington, DC voice for responsible outdoor recreation. It speaks to the Congress and the Federal public lands regulatory agencies on behalf of the people who want to enjoy the nation's great open spaces in ways that do not harm the environment and the national historic heritage. ARRA also aggressively challenges those groups and individuals that want to arbitrarily close off more public lands and waterways to recreational use.

THE ISSUES WE FACE

Today, millions of acres of public lands and waterways are already off-limits to many recreational uses. In some places the restrictions are necessary and proper to safeguard the public trust. Unfortunately, in many cases, this arbitrary policy has the potential to harm the lands it is supposed to protect. As development encroaches and increasing numbers of Americans take to the outdoors to escape from the pressures and hassles of 21st century life, the available open spaces are becoming more and more crowded and in danger of overuse.

At the same time, these limitations significantly reduce the entrance, user and special use fees, and contributions from visitors that could be spent to maintain, restore and repair public lands. The unfair restrictions also harm local economies by holding back employment opportunities and severely limiting the growth of local recreation-oriented businesses.

FAIR AND WORKABLE SOLUTIONS

ARRA is working to find the solutions that meet the critical needs of Federal land management. ARRA:

- Supports and encourages responsible use of public lands and waters.
- Opposes new restrictions on massive amounts of lands and waterways.
- Favors legislation to impose substantial penalties on the irresponsible few who "knowingly and willfully" harm our public lands.
- Favors consistency of those penalties among the agencies that administer public lands.
- Favors limitations on the availability of open spaces that could be harmed by even the most responsible use.
- Opposes rulemaking and regulatory decisions that are made behind closed doors and supports a completely open process that allows all interested groups and individuals to have a voice in the process.
- Supports outdoor recreation as a source of jobs and economic development in rural areas. ARRA seeks policy solutions that will facilitate such development.

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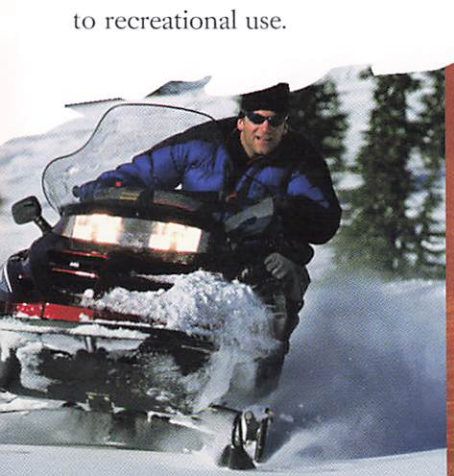
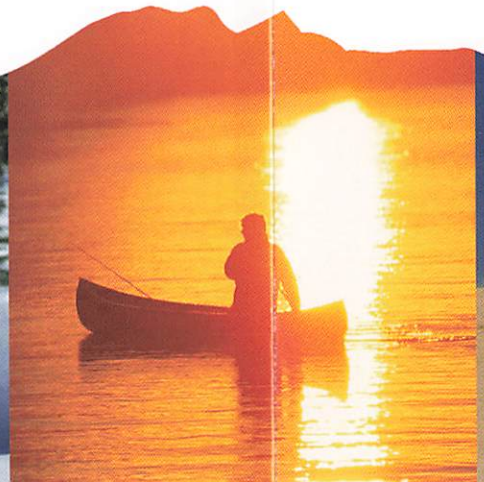
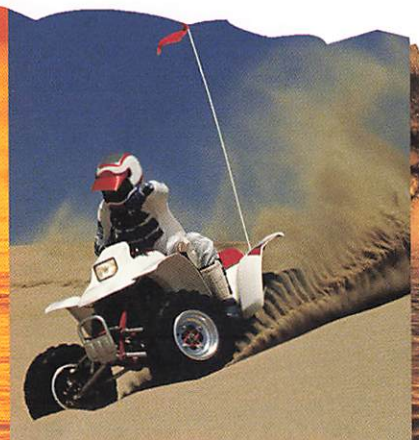
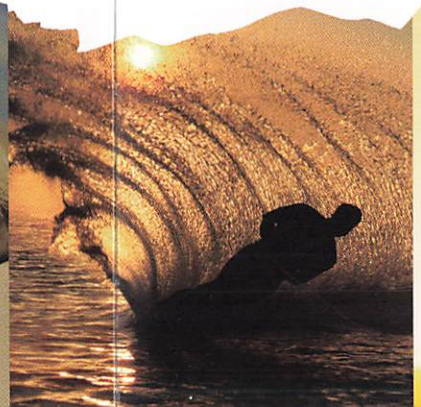

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ATV Safety Institute

A Division of the Specialty Vehicle Institute of America

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Troy Priest, Jr.

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